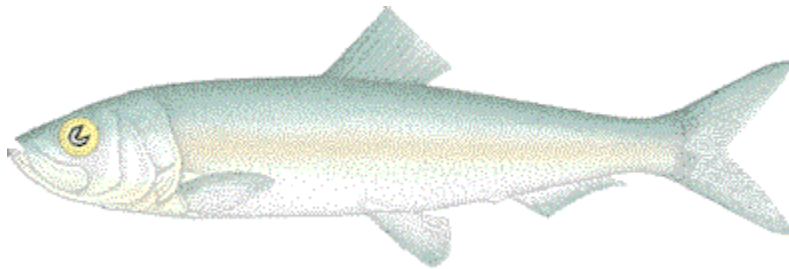




PACIFIC REGION INTEGRATED FISHERIES MANAGEMENT PLAN

PACIFIC HERRING

**NOVEMBER 7, 2011 TO
NOVEMBER 6, 2012**



Pacific Herring, Clupea pallasii

Canada

This Management Plan is intended for general purposes only. Where there is a discrepancy between the Plan and the regulations, the regulations are the final authority. A description of Areas and Sub-Areas referenced in this Plan can be found in the Pacific Fishery Management Area Regulations.

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FOREWARD

The purpose of this Integrated Fisheries Management Plan (IFMP) is to identify the main objectives and requirements for the Pacific herring fishery in the Pacific Region, as well as the management measures that will be used to achieve these objectives. This document also serves to communicate the basic information on the fishery and its management to Fisheries and Oceans Canada (DFO, the Department) staff, legislated co-management boards and other stakeholders. This IFMP provides a common understanding of the basic “rules” for the sustainable management of the fisheries resource.

This IFMP is not a legally binding instrument which can form the basis of a legal challenge. The IFMP can be modified at any time and does not fetter the Minister's discretionary powers set out in the *Fisheries Act*. The Minister can, for reasons of conservation or for any other valid reasons, modify any provision of the IFMP in accordance with the powers granted pursuant to the *Fisheries Act*.

Where DFO is responsible for implementing obligations under land claims agreements, the IFMP will be implemented in a manner consistent with these obligations. In the event that an IFMP is inconsistent with obligations under land claims agreements, the provisions of the land claims agreements will prevail to the extent of the inconsistency.

1 OVERVIEW

1.1 Introduction

This Integrated Fisheries Management Plan (IFMP) for Pacific herring covers the period from November 7, 2011 to November 6, 2012.

This IFMP provides a broad context to the management of the Pacific herring fishery and the interrelationships of all fishing sectors involved in this fishery. Section 2 considers stock assessment, while Sections 3 and 4 consider the social, cultural, and economic performance of the fishery and its broader management issues. Section 5 describes the objectives to address the issues identified in Section 4. Sections 6 and 7 describe allocation and management procedures.

The Appendices provided with the IFMP provide information that is updated annually, such as the post season review, stock assessment results, expected use table, and fishing plans by sector and by fishery.

1.2 History

The commercial Pacific herring fishery started in British Columbia in the 19th Century for the local food market, and quickly expanded into a dry salt fishery for the orient. In 1937 a reduction fishery was also established to produce fish meal and fish oil (Hourston and Haegele, 1980). After the collapse of the Pacific sardine in the late 1940s, Pacific herring became the major fishery off Canada's Pacific coast, and catches steadily increased to over 200,000 tons in the early 1960s (Beamish *et al.* 2004). This dramatic increase was unsustainable and by 1965 most of the older fish had been removed from the spawning population by a combination of overfishing and a sequence of weak year-classes attributed to unfavourable environmental conditions and a low spawning biomass. As a result, the commercial fishery collapsed in 1967 and was closed by the federal government to rebuild the stock. Following the fishery closure, a series of above average year-classes in the early 1970s quickly rebuilt the stock and the fishery was re-opened in 1973 (DFO 2008).

During the closure from 1967-1971, small fisheries continued locally for food and bait (Hourston and Haegele, 1980). At this time there was a growing interest to harvest roe herring for export to Japan. A small experimental roe harvest began in 1971, and limited entry licences were introduced in 1974. This fishery expanded rapidly, and in 1983 fixed quotas were introduced to regulate the catch (DFO 2008) and to address the difficulty of managing a large fishing fleet. Today most Pacific herring are fished for roe, which is sold in Japan. The remainder of the commercial fisheries is divided between spawn on kelp production and the food and bait market. The recent fishery is small compared to the past, catching between 15% and 30% of historic levels (Beamish *et al.* 2004).

1.3 Type of Fishery and Participants

1.3.1 First Nations

Aboriginal harvest for food, social, and ceremonial purposes may occur coast wide where authorized by a communal licence. There are an unknown number of Aboriginal harvesters for Pacific herring in the Pacific Region.

Although harvest amounts are not large, Pacific herring are an important resource for First Nations, and are used for food, social and ceremonial purposes.

1.3.2 Recreational

A recreational fishery may also occur coast wide. While the number of recreational fishers is unknown, the fishing effort is thought to be minimal.

1.3.3 Commercial

Currently there are four commercial fisheries:

Roe herring: Licence eligibilities are party based and limited, currently there are 252 seine licences and 1,268 gill net licences.

Spawn on kelp: Licence eligibilities are party based and limited, currently there are 46 licences. Sixteen First Nation bands operate 26 licence eligibilities, while the remainder are fished by individual First Nations and non-Aboriginal operators.

Food and bait herring: Licence eligibilities are party based, and access is provided to seine vessels by way of lottery to applicants who meet the application criteria.

Special use herring: Licence eligibilities are party based, and are open access on a first come first serve basis. There are several fishery participants who hold unique quotas that are for specific purposes.

1.4 Location of Fishery

1.4.1 First Nations and Recreational

Aboriginal and recreational harvest may occur coast wide, subject to appropriate licensing and permanent and area closures listed in this management plan.

1.4.2 Commercial

With the exception of permanent closures for various purposes and annual area closures based on advice received from the Canadian Science Advisory Secretariat (CSAS) stock assessment process, the current commercial fisheries occur coast wide in units described as Major Stock Assessment Areas, Minor Stock Assessment Areas, and in other management areas and subareas on a case-by-case basis. Areas and subareas, as described in the *Pacific Fishery Management Area Regulations*, are referenced in describing Major Stock Assessment Areas and Minor Stock Assessment Areas.

1.5 Fishery Characteristics

1.5.1 First Nations

First Nations fish for whole herring and herring roe for food, social and ceremonial purposes (FSC). Whole herring are fished by seine, gillnet, rake, dip net, and jig, and herring eggs are collected as spawn on kelp or other seaweed, or spawn-on-tree boughs. There is a coast wide allocation of herring for FSC needs, which allows for activity in all stock assessment areas.

1.5.2 Recreational

Whole herring may be fished for recreational purposes year round. The daily maximum sport limit for herring is 20 kg, with a two day possession limit of 40 kg. Recreational harvesting may occur by means of dip net, herring jig, herring rake, or cast net.

1.5.3 Commercial

The gear type, commercial licence year, and fishing period varies for each of the four herring fisheries. The specifics on these fisheries are provided in Appendices 7 to 10.

A range of fixed and mobile gear is used, depending on the fishery. All the fisheries permit the use of seine nets, and the roe fishery may also use gillnets. The spawn on kelp and special use fisheries may also use enclosures, or ponds, in their operations. Rakes, dip nets, gillnets and hoop nets may also be used in the special use fishery.

All herring licences are party based, and operate under a Total Allowable Catch (TAC) or specific allocations that are distributed across the four commercial fisheries. All commercial fisheries are limited entry except for the special use fishery, which is open access and the Food and Bait (ZM) fishery, which is lottery access.

1.6 Governance

Management of Pacific herring is directed by the *Fisheries Act* and the regulations made thereunder, including:

- Areas and Subareas, as described in the *Pacific Fishery Management Area Regulations*, are referenced in describing Pacific Herring Management Areas;
- The *Fishery (General) Regulations* (i.e. Conditions of Licence) and the *Pacific Fishery Regulations*, 1993 (i.e. open times);
- The *Aboriginal Communal Fishing Licence Regulations*;
- The *British Columbia Sport Fishing Regulations*;
- The *Oceans Act*; and,
- The *Species at Risk Act*.

These documents are available on the Internet at:

http://www.pac.dfo-mpo.gc.ca/ops/fm/toppages/actreg_e.htm

In addition, the new national Sustainable Fisheries Framework contains policies for adopting an ecosystem based approach to fisheries management including:

- A Fishery Decision-Making Framework Incorporating the Precautionary Approach;
- Managing Impacts of Fishing on Benthic Habitat, Communities and Species;
- Policy on New Fisheries for Forage Species.

Along with existing economic and shared stewardship policies, these will help the department meet objectives for long-term sustainability, economic prosperity, and improved governance.

For more information on these departmental objectives, please visit:

<http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/overview-cadre-eng.htm>

1.7 Consultation

DFO has a broad mandate, with the authority to regulate and enforce activities, develop policy, provide services and manage programs. To help ensure that the Department's policies and programs are aligned with its vision and effectively address the interests and preferences of Canadians, DFO supports consultations that are transparent, accessible and accountable.

DFO Pacific Region undertakes consultations in order to improve departmental decision-making processes, promote understanding of fisheries, oceans and marine transport issues, and strengthen relationships.

For more information on the consultative process for herring, please visit:

<http://www.pac.dfo-mpo.gc.ca/consultation/fisheries-peche/pelag/index-eng.htm>

1.7.1 Integrated Herring Harvest Planning Committee

The Integrated Herring Harvest Planning Committee (IHHPC) is the primary multi-stakeholder body to provide input to DFO's decision making processes for this fishery. The IHHPC was established by DFO to promote a more streamlined, representative, cross-sectoral advisory process related to herring harvest planning, management, and post-season review.

The goal of the IHHPC is to support the development of fishing plans that are coordinated and integrated, to identify potential conflicts, and to make recommendations for resolving disputes. The committee operates on a consensus basis, does not have an approval capacity, and does not deal with recommendations on FSC harvest plans.

Participation in advisory processes reflects a broad range of interests in fisheries and oceans issues in the Pacific Region, so that a diversity of perspectives is involved. Membership in the IHHPC is comprised of representatives from First Nations, the spawn on kelp fishery, the Herring Industry Advisory Board (HIAB), the special use fishery, the Marine Conservation Caucus (MCC), the Sport Fishing Advisory Board (SFAB), the Province of BC, and DFO.

For more information on the IHHP, please visit:
<http://www.pac.dfo-mpo.gc.ca/consultation/fisheries-peche/pelag/her-har/ihhpc/index-eng.htm>

1.8 Approval Process

This plan is approved by the Regional Director General for the Pacific Region.

2 STOCK ASSESSMENT, SCIENCE AND TRADITIONAL KNOWLEDGE

2.1 Biological Synopsis

Pacific herring (*Clupea pallasii*) is a pelagic species which occurs in inshore and offshore waters of the North Pacific. In the eastern Pacific, herring are found from Baja California to the Beaufort Sea in Alaska.

Herring mature and recruit to the spawning stock primarily between ages three and five. Within this range, age-at-recruitment tends to increase with latitude. Adult males and females migrate from the open ocean to sheltered bays around November or December, although in the far north of the range, these dates may be somewhat later.

Conditions that trigger spawning are not altogether clear, but after spending weeks congregating in the deeper channels, both males and females will begin to enter shallower inter-tidal or sub-tidal waters. Preferred spawning locations are sheltered bays and estuaries, commonly on eelgrass or other submerged vegetation. A single female may produce as many as 20,000 eggs in one spawn, however the juvenile survival rate is only about one resultant adult per ten thousand eggs, due to high predation by numerous other species (Hay 1985).

2.2 Ecosystem Interactions

At this time there is no information available on the appropriate conservation limits for herring based on ecosystem considerations. It is recognized that herring plays a critical role in the ecosystem and are a food source for a variety of species. The precautionary harvest rate of 20% of the mature biomass (see PA section below) ensures that 80% of the adult population is available to predator species and future production. Additionally, since no harvest occurs on immature herring, these fish are available to support ecosystem processes. Recent research indicates that the interplay of food supply and predation impacts on herring survival and production is complex and not readily predictable (Schweigert et al. 2010). Research is ongoing to better understand these ecosystem processes and the role herring plays in maintaining the integrity and functioning of the ecosystem.

2.3 Aboriginal Traditional Knowledge/Traditional Ecological Knowledge

2.3.1 Aboriginal Traditional Knowledge

First Nations provide information to DFO on herring behavior, spawn timing, abundance, ecosystem relationships, and fishing methods, based on their historic and cultural knowledge of the species and of their local areas.

2.3.2 Traditional Ecological Knowledge

Traditional ecological knowledge (TEK) in the form of observations and comments provided by commercial fishery participants, local residents, and DFO field staff contributes to the base of knowledge regarding herring behavior, spawn timing, and abundance. Fishery participants provide information to DFO on herring behaviour, spawn timing, abundance, ecosystem relationships and fishing methods, based on their historic and cultural knowledge of the species and of the areas harvested.

2.4 Stock Assessment

2.4.1 Stock Assessment Overview

Pacific herring are currently managed as five major and two minor stock areas. Accordingly, catch and survey information is collected independently for each of these seven areas and science advice is provided on the same scale.

Since the early 1980's, a statistical catch-age model has been used to provide stock assessment advice for the major stock areas (Haist and Stocker 1984). In 2006 the catch-age model was updated in a Bayesian framework as the herring catch age model (HCAM, Haist and Schweigert 2006), used for the 2006 through 2010 stock assessments with additional modifications (Christensen *et al.* 2009, Cleary and Schweigert 2011). A new version of the model was introduced for the current assessment, integrated statistical catch age model (ISCAM, Martell et al 2011)

The precautionary approach is one component of the sustainable fisheries framework and precautionary limits are established to ensure that harvest proceeds in a sustainable manner and that sufficient biomass is available to replenish the stocks on an ongoing basis. The 20% harvest rate for Pacific herring was introduced in 1983 and commercial fishing thresholds or cut-off levels were added in 1986. The 20% harvest rate is based on an analysis of stock dynamics, which indicates this level will stabilize both catch and spawning biomass while foregoing minimum yield over the long term (Hall et al. 1988, Zheng *et al.* 1993). The commercial cut-off levels are established at 25% of the unfished biomass, as determined by simulation analyses. Stock assessment areas are recommended to be closed to commercial harvest when the stock is forecast to be below the cut-off levels. Cut-off levels have been revised from time to time.

The Centre for Science Advice Pacific (CSAP, formerly PSARC) has reviewed the biological basis for target exploitation rate, considering both the priority of assuring conservation of the resource and allowing sustainable harvesting opportunities (Schweigert and Ware 1995). The review concluded that 20% is an appropriate

exploitation rate for those stocks that are well above the cut-off or minimum spawning biomass threshold levels for commercial fisheries. For those stocks which are marginally above cut-off the following reduced catch level is recommended:

$$\text{catch} = \text{forecast run} - \text{cut-off}$$

This will provide for smaller fisheries in areas where the 20% harvest rate would bring the escapement down to levels below the cut-off.

2.4.2 Data Sources

The herring assessment model is driven by three sources of data: commercial catch landings, a spawn survey index and age composition data. Each of these times series of data represent the collective efforts of the herring industry, First Nations and DFO Science and Fisheries Management. For the purposes of stock assessment, fishery and survey data from 1951 onwards are used in the model.

Catch information is obtained from landing slips or monitoring of plant offload data. Historically, landing slip data were summed by fishery season. Beginning in the 1997/1998 season, catch figures have been based on verified plant offload weights.

Herring spawn surveys have been conducted throughout the B.C. coast since the 1930's. In years prior to 1988, spawn surveys were conducted from the surface either by walking the beach at low tide or using a drag from a skiff to estimate the shoreline length and width of spawn. Herring spawn surveys using SCUBA methods were introduced in 1988 and became coast wide within a couple of years.

Age composition data are obtained from biological samples collected from both the commercial catch and from test fishery charters, which supplement biological samples in areas where catch samples are limited or not representative of the entire stock, or in areas where fisheries are closed. Industry also conducts pre-season test sets for roe quality testing (in open areas only) and supplementary biological samples are provided as part of this program. For each of these samples, fish length, weight, age, sex, and maturity is recorded, information which then becomes input data for the assessment model.

Prior to the 2006 Larocque ruling, the test fishing program and pre-fishery charters were funded through an allocation of fish by industry. In years since the ruling, the test fishery and spawn survey programs have been funded by DFO.

2.5 Precautionary Approach

In general, the precautionary approach in fisheries management is about being cautious when scientific knowledge is uncertain, and not using the absence of adequate scientific information as a reason to postpone or fail to take action to avoid serious harm to fish stocks or their ecosystem. This approach is widely accepted as an essential part of

sustainable fisheries management (see <http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/overview-cadre-eng.htm>.)

Applying the precautionary approach to fisheries management decisions entails establishing a harvest strategy that:

- identifies three stock status zones – healthy, cautious, and critical – according to upper stock reference points and limit reference points;
- sets the removal rate at which fish may be harvested within each stock status zone; and,
- adjusts the removal rate according to fish stock status variations (i.e., spawning stock biomass or another index/metric relevant to population productivity), based on pre-agreed decision rules (Figure 1).

In this figure, the limit reference point separates the critical and cautious stock zones while the upper stock reference point separates the cautious and healthy stock zones. The removal reference (harvest control rule) defines the maximum acceptable removal rate which is constant in the healthy zone, reduced in the cautious zone and negligible (little or no targeted catch) in the critical zone.

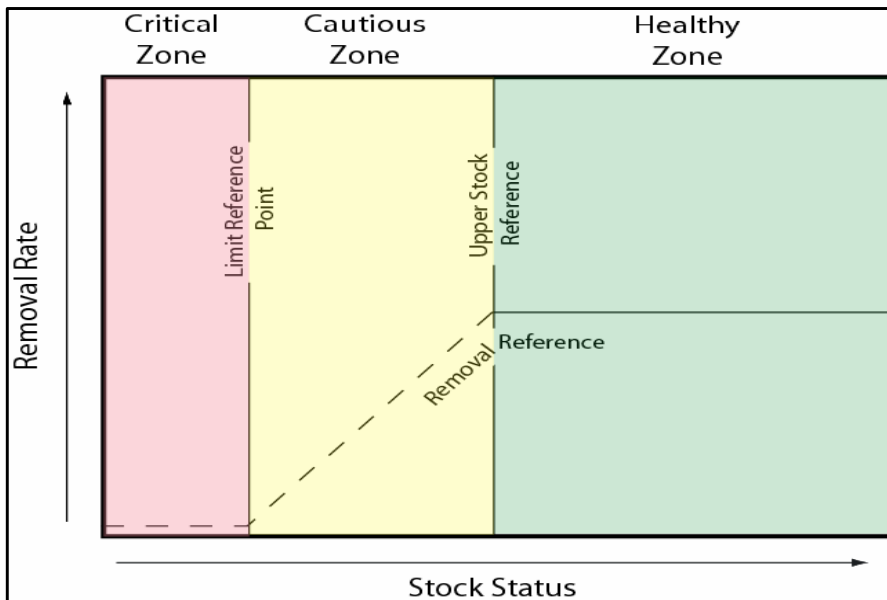


Figure 1: The DFO harvest strategy compliant with the precautionary approach.

A formal harvest control rule has been used to provide advice for the management of major B.C. herring stocks since 1986. The herring harvest control rule has three components: (1) reference point, (2) harvest rates and (3) decision rules. These are the same three components identified within the DFO Harvest Strategy Compliant with the Precautionary Approach (http://www.dfo-mpo.gc.ca/csas/Csas/status/2006/SAR-AS2006_023_E.pdf). However, these components are defined somewhat differently in

the case of herring. For example, in herring management there is only a lower stock reference point, the commercial harvest cut-off. The Department is currently evaluating the compliance of the current herring harvest control rule with the DFO harvest strategy.

2.6 Research

Research activities have focused on annual data collection and database management, stock identification, and the influence of habitat and climate factors on herring survival and recruitment. Stock assessment related research activities consist of reviewing and evaluating the biological assumptions underlying the assessment models. The models are revised and adapted to incorporate new findings about herring population biology. Recent updates and modifications include revised parameterizations for adult natural mortality rate, fishing gear selectivity, and for estimation of spawn survey catchability coefficients.

Over the past several years, a considerable amount of effort and resources (in collaboration with and through funding from the HCRS) has been expended in the area of stock identification. Projects included microsatellite DNA analysis, coded-wire tagging, and herring metapopulation analysis. These studies all support the stock definition utilized in annual stock assessments. Recent tagging studies support previous findings of some herring movement between assessment areas, a result consistent with the absence of any detectable genetic differentiation among herring stocks.

An ongoing survey has examined the fall distribution and relative abundance of juvenile herring in the Strait of Georgia since 1991. This survey examines the distribution, abundance, food and feeding of juvenile herring and salmonids to address the role of forage fish in an ecosystem. A similar survey has been conducted in the Central Coast over the last several years.

Other projects address the effects of habitat and climate issues on herring survival and productivity. One program is examining the influence of climatic variations and species interactions on West Coast of Vancouver Island herring recruitment and growth. Another study is monitoring euphausiid and copepod population biology to assess the effects of variation in their productivity on the population biology of West Coast of Vancouver Island herring.

Finally, DFO is exploring the use of a management strategy evaluation (MSE) approach to address questions related to survey funding and compliance of the herring management framework with the precautionary approach. For example, there is interest in evaluating how changes in survey effort, spatial coverage, and/or biological sampling will benefit or compromise management of the herring stocks. MSE is also being used to evaluate compliance of the herring harvest control rule with the DFO precautionary harvest strategy.

3 SOCIAL, CULTURAL, AND ECONOMIC IMPORTANCE

3.1 Overview

Herring has been an important species for British Columbia's commercial fisheries for over 100 years. They are harvested in the roe, spawn on kelp, food and bait, and special use fisheries, creating employment and contributing significantly to revenue generated from fisheries in BC. The herring fisheries are also extremely important to BC First Nations, both commercially and as traditional food.

Declining stock abundance in recent years has resulted in closures of three of the five major stock assessment areas, contributing to lower overall catch. In addition, the main herring fisheries are predominantly focused on the Japanese export market which has undergone some changes and Canada's products are now facing more competition from Alaska, particularly in spawn on kelp.

This brief socioeconomic profile will focus mainly on the roe herring and spawn on kelp fisheries, as most available data describes these fisheries and they make up the vast majority of the fishery's value. The following sections will look at viability and market trends; processing and exporting; employment capacity; and licences.

3.2 Viability and Market Trends

Of the four herring fisheries, roe herring is by far the dominant fishery (Figure 2). In 2010, the total amount of roe herring landed was approximately 10,218 short tons, about 92% of total herring landings for that year (excluding spawn on kelp). Total catch of roe herring has generally been declining over the past few years. Closures of three major fishing areas as well as declining TAC in the two areas remaining open are the main cause of the decline in catch.

The primary market for the roe is Japan, where this product has been a highly valued delicacy. However, due to Japan's recent economic crisis and changing demographics, the demand for roe herring products, provided as traditional gifts, has been declining in recent years.

Like roe herring, spawn on kelp is highly valued by the Japanese, who again are the primary consumer for this product. After many years of steady spawn on kelp production in BC (up to 2004), the volume of landings has fallen dramatically. In 2010, the spawn on kelp harvest level was roughly 188,000 lbs, which is about 77% lower than the high that was seen in 2003.

Spawn on kelp's share of total herring landed value from 2006 to 2008 was quite high, contributing 25-35% in these years. This is most likely due to the relatively higher landed price of spawn on kelp which was \$6/lb, \$14/lb and \$11/lb respectively. However, prices in recent years are significantly lower than the peak that was seen in the mid/late 1990s. The long term decline in the overall value of the spawn on kelp market in Japan can be mainly attributed to a drop in prices stemming from the elimination of the price premium that Canada was previously able to garner. Alaska's production of spawn

on kelp has also been on the rise and the US has overtaken Canada as the largest supplier of spawn on kelp to the Japanese market. These economic challenges have created a difficult business environment for BC harvesters and have put pressure on profits.

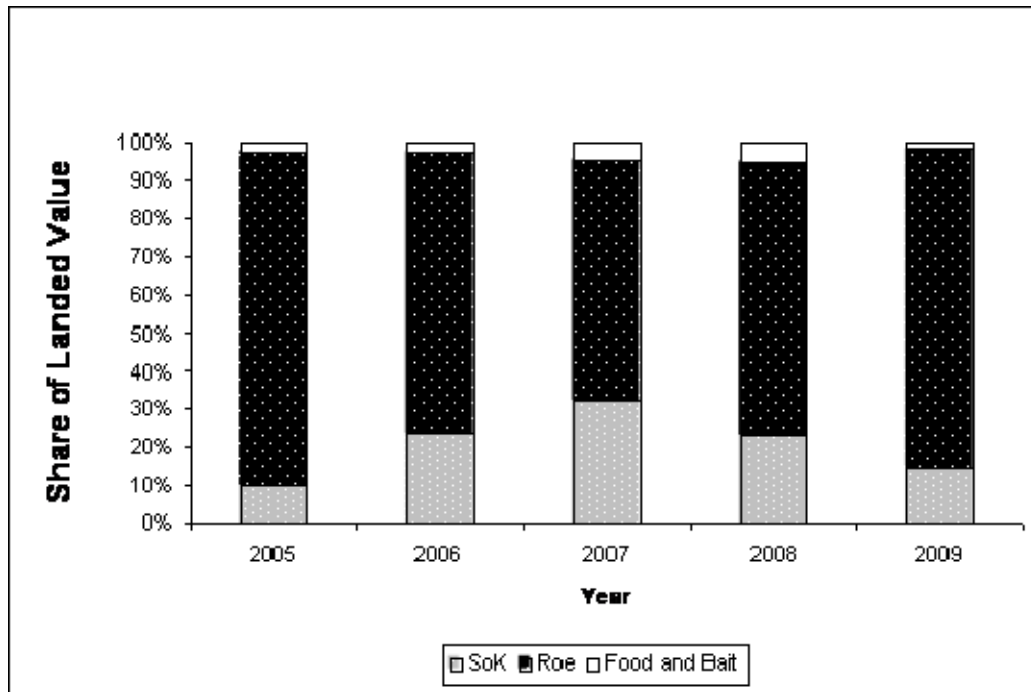


Figure 2: Annual share of herring landed value.

Source: B.C Ministry of the Environment, BC Seafood Industry, Year in Review 2007 & 2008 Reports.

3.3 Processing and Exporting

Once it is processed, herring can be found in many different forms such as fresh, pickled, and most importantly, spawn on kelp and roe herring. Roe herring, on average, contributes roughly 85% of the total wholesale value (value after processing, which includes processing of imported raw product). Japan is the number one importer of BC's herring, followed by Germany and the United States. On average, Japan imports more than 60% of B.C.'s herring, mainly the spawn on kelp and roe herring. Figure 3 demonstrates BC's herring export value by importing country.

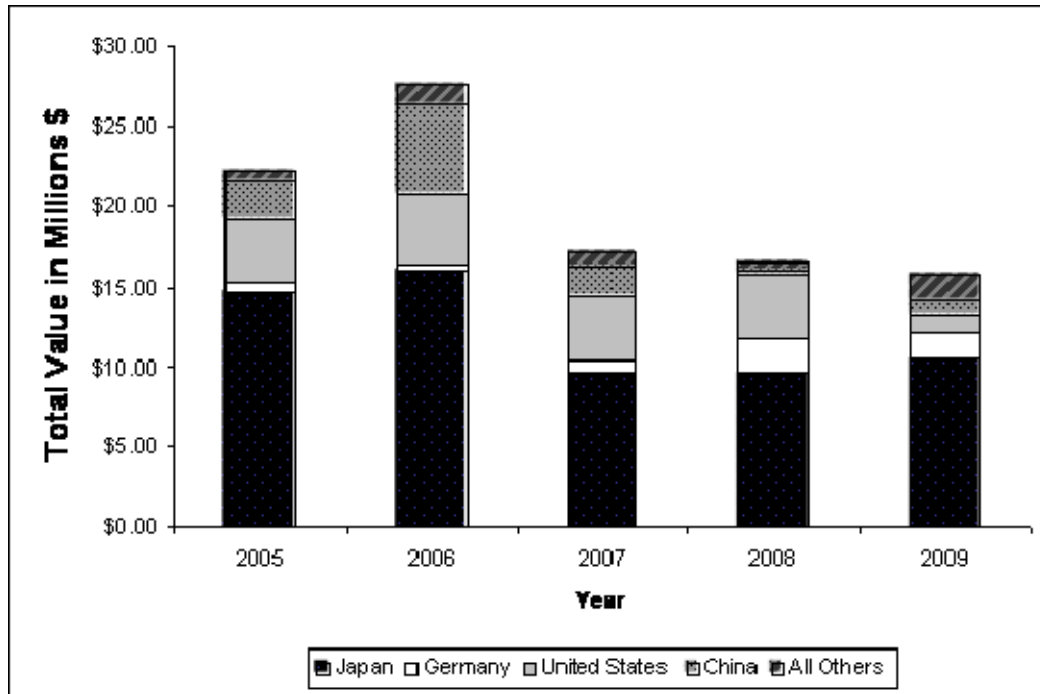


Figure 3: Total herring export value by country.

Source: Global Trade Information Data Base

Since Japan is the main destination for herring roe and spawn on kelp, wholesale prices are vulnerable to market conditions and overall performance in the Japanese economy. While Canada's export of roe herring and spawn on kelp to Japan have been on the decline in recent years, Alaska's herring exports – particularly spawn on kelp - to Japan have been increasing, easily taking Canada's forgone market share

The total quantity of herring exported in 2009 was 6.2 million lbs, down from 9.2 million lbs in 2008. The total export value also witnessed a drop but not directly proportional to the changes in quantity due to higher wholesale prices (Figure 4).

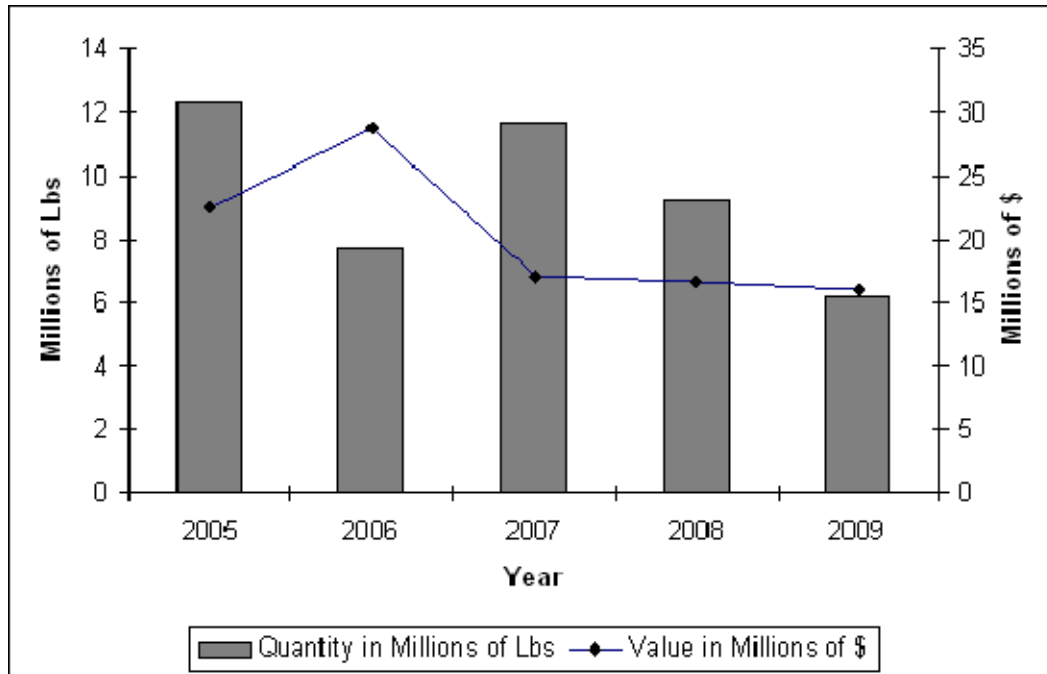


Figure 4: Total value and quantity of domestic herring exports to the world.

Source: Industry Canada, online trade information

3.4 Employment Capacity

The latest available data (2005, Table 1) shows that approximately 66 thousand person months of employment (5,740 full time equivalents ‘FTE’¹) were generated by the seafood processing industry in B.C, which is primarily focussed on the processing of roe herring. The method to process herring roe is very similar to that for salmon roe.

Herring processing operations were responsible for approximately 631 FTE (11%) of the total employment in the processing sector, however, as current catch levels are about 40% of 2005 catch levels; so employment levels currently supported by herring may be lower. Herring processing operations are marginally more labour intensive than halibut on a per pound basis but provide a much lower value added. However, compared to all other groundfish combined, herring processing provides a higher value added per pound processed but requires more FTEs.

¹ 1 FTE = 11.5 Persons months

Table 1: Estimated employment distribution in the fish processing industry by species (2005).

Species	Estimated Persons/Month	Estimated FTEs	Share of Total Sector's Employment
Wild & Cultured			
Salmon	26,400	2,296	40%
Halibut	2,640	230	4%
Herring	7,260	631	11%
Groundfish	17,820	1,550	27%
Wild & Cultured			
Shellfish	11,880	1,033	18%
Total	66,002	5,740	100%

Source: B.C Ministry of the Environment. British Columbia Seafood Processing Employment Survey 2005 ²

3.5 Licensing

The number of herring licences has been steady across all herring fisheries with the exception of special use licences. Seine and gill net herring fleets are organized into pools, and so are essentially fished communally, with a lesser number of vessels harvesting and packing for the group. Therefore, many licence holders may be inactive in the fishery each season.

The roe herring fishery offers an active lease market for licences, which allows licence holders to derive some income through leasing of licences. Lease rates have increased in recent years, but are still below historical levels³.

4 MANAGEMENT ISSUES

The following section highlights the ongoing, longer term management issues in the Pacific herring fisheries. Immediate or annual management issues are addressed by fishery in Appendices 7 to 10.

4.1 First Nations

With some areas of the coast at low abundance, DFO has received reports that First Nations have had difficulties conducting successful fisheries for FSC herring in their local areas, which is generally their preference. The level of First Nations' harvest of whole herring and spawn is unknown at this time. Catch monitoring and co-management programs are being developed in collaboration with some Aboriginal communities and organizations to improve DFO's understanding of this fishery component.

² Information presented under this section is based on the 2005 British Columbia Seafood Processing Employment Survey. More recent employment information is traced by the province but official report has not been released.

³ Nelson Bros. Fisheries Ltd. Commercial Fishing Licence, Quota, and Vessel Value 2009

4.2 Recreational

There are no identified issues. The harvest and participation rate of recreational fishing for herring is unknown at this time, although it is generally accepted to be minimal. Improvements to catch monitoring programs for recreational fisheries are under development.

4.3 Commercial

Areas open to commercial fishing: A number of the five major stock assessment areas for Pacific herring have been closed to commercial fishing for a number of years due to low estimated stock abundance. Given that there has been limited stock recovery, even in the absence of commercial fisheries, an assessment to determine appropriate rebuilding and harvest strategies is being considered by the department prior to reopening fisheries in these areas.

4.3.1 *Roe Herring*

Commercial Fishing Licence Fees: Licence harvesters and the Integrated Herring Harvest Planning Committee have identified lowering commercial fishing licence fees as an urgent issue for this fishery. Harvesters recommend license fees for BC herring fisheries be adjusted to a more equitable fee structure that aligns fees with fishing revenue.

Annual fluctuations of coast wide TAC: The roe herring sector requires relatively stable allocation of herring in order to preserve the market from year to year. Global economics and herring catch fluctuations in other countries impact market considerations, and the profitability of the roe herring fishery.

Stock age-class structure: The abundance of specific year classes in a particular fishery area impacts the herring gear catchability and roe size of the fishery.

Fishery timing: Ensuring that fisheries are timed to optimize roe quality and that product arrives at processing facilities in a time frame that the offloading and processing of catch does not impact the roe quality is challenging for both Industry and Fisheries Management, requiring on-grounds testing and open communication.

Management to area and gear quotas: The dynamic nature of the roe fishery requires extensive in-season management and cooperation from industry to ensure quotas are met but not exceeded.

4.3.2 *Spawn on Kelp*

Commercial Fishing Licence Fees: Licence harvesters and the Integrated Herring Harvest Planning Committee have identified commercial fishing licence fees as an urgent issue for this fishery. Harvesters are requesting fees be adjusted to reflect long-standing trends in resource decline or decline in consumer demand and are requesting a more equitable fee structure that aligns fees with fishing revenues.

Licence nomination: The restriction on licence nomination (non-transferability) in this fishery has been identified as issue, as some individual fishery participants are no longer able or do not wish to continue to participate in the fishery yet cannot easily exit the fishery.

Restricted fishing opportunities: Due to low stock strength, participants face restricted fishing opportunities in several areas.

Herring enclosures: The amount of herring used in a herring enclosure, number of enclosures, disease impacts, mortality estimates, and general management practices for this fishery require further examination to ensure that stock and ecosystem impacts are better understood.

4.3.3 Food and Bait

Weather: The ability to harvest the vessel quotas may be difficult in a given year, due to the timing of this fishery (November to February) to harvest food and bait quality fish.

Management Measures: As the scale of the fishery expands, the department will implement enhanced management measures for proper management and control of fishery harvest. An evaluation framework has been initiated with input from fishery participants to identify program objectives and performance measures for assessment of the monitoring program.

Best Fishing Practices: The department is working collaboratively with the Herring Industry Advisory Board, in conjunction with Fish Safe and the service provider to support distribution of a checklist of best fishing practices to address safety and compliance considerations for this fishery.

4.3.4 Special Use

Herring enclosures: The amount of herring used in a herring enclosure, number of enclosures, disease impacts, and general management practices for this fishery require further examination to ensure that stock and ecosystem impacts are better understood.

Complexity: The licensing structure for this fishery is complex and requires significant administration by the Department.

Decreasing size-at-age: The trend of decreasing size-at-age presents challenges for a number of participants, e.g. producers of bait, pickled herring food products, and zoo and aquarium users.

4.4 Gear Impacts

Under normal operating circumstances, there is minimal to no environmental impact from gear types used in the Pacific herring fishery. During the roe fishery, efforts are to conduct fisheries in areas to avoid impact to sensitive spawning habitat, such as eel grass beds. In the spawn on kelp fishery, participants are encouraged to distribute their efforts geographically to avoid local impacts. There is potential for impacts to the benthic

habitat in this fishery if poor pond husbandry is exercised and there is large mortality of ponded herring that is not properly disposed.

Abandoned gear (e.g. nets or enclosure webbing) can cause local impacts, and attempts are made in the fishery to remove all such gear once fishing activities have been completed.

There is some ecological impact with respect to marine mammal and sea bird encounters, specifically with ponding operations. Mitigation measures, including use of predator netting, weekly pond inspections, and post-season release of ponded herring, are employed.

4.5 Depleted Species Concern

Encounters by SARA-listed species (e.g. steller sea lion) and other marine mammals and seabirds occur infrequently in herring fisheries. The Department and the fishing industry collect information on these encounters on behalf of the Canadian Wildlife Service of Environment Canada.

4.6 Oceans and Habitat Considerations

4.6.1 International Commitments

Recent commitments to International Agreements such as the Food and Agriculture Organization (FAO) Code of Conduct for Responsible Fishing (FAO 1995), the United Nations Fish Stock Agreement (UN 1996) and the Johannesburg Agreement (UN 2002) have shaped the development of a national Sustainable Fisheries Framework (SFF, DFO 2009) guide Canada's domestic and international commitments for implementing a precautionary approach into its decision-making framework for fisheries.

4.6.2 Oceans Act

In 1997, the Government of Canada enacted the *Oceans Act*. This legislation provides a foundation for an integrated and balanced national oceans policy framework supported by regional management and implementation strategies. In 2002, Canada's Oceans Strategy was released to provide the policy framework and strategic approach for modern oceans management in estuarine, coastal, and marine ecosystems. As set out in the *Oceans Act*, the strategy is based on the three principles of sustainable development, integrated management, and the precautionary approach.

For more information on the *Oceans Act*, please visit:
<http://www.dfo-mpo.gc.ca/oceans/oceans-eng.htm>

4.6.3 Sustainable Fisheries Framework

The Sustainable Fisheries Framework (SFF) is a toolbox of existing and new policies for DFO to sustainably manage Canadian fisheries by conserving fish stocks while supporting the industries that rely on healthy fish populations. The SFF provides planning and operational tools that allow these goals to be achieved in a clear,

predictable, transparent, and inclusive manner, and provides the foundation for new conservation policies to implement the ecosystem and precautionary approaches to fisheries management. These new policies include;

- Managing the Impacts of Fishing on Sensitive Benthic Areas;
- New Fisheries for Forage Species; and,
- A Fishery Decision-Making Framework Incorporating the Precautionary Approach.

For more information on the Sustainable Fisheries Framework and its policies, please visit:

<http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/fish-ren-peche/sff-cpd/overview-cadre-eng.htm>

4.6.4 Pacific North Coast Integrated Management Area

As part of Canada's Oceans Strategy, DFO is initiating an integrated management planning process for the Pacific North Coast Integrated Management Area (PNCIMA). The PNCIMA is bounded by the BC-Alaska border, the base of the shelf slope and the mainland, stretching south as far as Campbell River and the Brooks Peninsula, and marks a shift toward a broader ecosystem approach to ocean management.

The PNCIMA initiative will bring stakeholders together to develop an integrated management plan for the region that achieves conservation, sustainable resource use, and economic development goals for oceans and coastal areas, as well as complementing and linking existing processes and tools, including IFMPs.

For more information on PNCIMA, please visit:

<http://www.dfo-mpo.gc.ca/oceans/marineareas-zonesmarines/loma-zego/index-eng.htm>

4.6.5 Marine Protected Areas

DFO is responsible for designating Marine Protected Areas (MPAs) under Canada's Oceans Act. Under this authority, DFO has designated two MPAs in the Pacific Region. The Endeavour Hydrothermal Vents, designated in 2003, lie in waters 2,250m deep 250 km southeast of Vancouver Island. The Bowie Seamount, designated in 2008, is 180 km west of Haida Gwaii rising from a depth of over 3,000 m to within 25 m of the sea surface. Work is ongoing to consider MPA designations for other areas along the Pacific Coast, including the Race Rocks area off Rocky Point south of Victoria (currently designated as a Provincial Ecological Reserve) and the Hecate Strait / Queen Charlotte Sound Glass Sponge Reefs.

For more information on marine protected areas, please visit:

<http://www.dfo-mpo.gc.ca/oceans/marineareas-zonesmarines/mpa-zpm/index-eng.htm>

4.6.6 National Marine Conservation Areas

The Canada National Marine Conservation Areas Act provides for the establishment of National Marine Conservation Areas (NMCAs). The Gwaii Haanas National Marine

Conservation Area Reserve and Haida Heritage Site (Gwaii Haanas Marine Area) was established on June 17, 2010.

As part of the establishment process, Parks Canada, Fisheries and Oceans and the Council of the Haida Nation have developed an Interim Management Plan for the Gwaii Haanas Marine Area which will be implemented in 2011. The Interim Management Plan includes an Interim Zoning Plan which identifies six Fully Protected Areas, described below. Commercial and recreational fishing is not permitted in these areas. Development of a long term management plan for the Gwaii Haanas Marine Area will take place over a five year period following establishment in consultation with the commercial and recreational fishing sectors through the Department's established integrated fishery planning and advisory processes.

Commercial fishing activities within the Gwaii Haanas Marine Area will be managed through the Integrated Fisheries Management process. Annual fishing plans will be developed in consultation with stakeholders and specific actions (openings and closures) for the Gwaii Haanas Marine Area will be taken under the authority of the Fisheries Act and its regulations.

Areas closed are described below:

All tidal waters of Gwaii Haanas National Marine Conservation Area Reserve and Haida Heritage Site:

(1) Burnaby Narrows

Those waters of Subareas 2-13 and 2-16 inside a line commencing at 52°232 0713 N and 131°2024273 W east to 52°2320793 N and 131°222793 W, following the southern shoreline of Kat island east to 52°2321043 N and 131°2221933 W, then east to 52°2323033 N and 131°3122773 W, following the western shoreline of Burnaby Island south to 52°2029823 N and 131°2024273 W, then west to 52°2027333 N and 131°210633 W, and then north following the eastern shoreline of Moresby Island back to the point of commencement. [Burnaby Narrows]

(2) Louscoone Estuary

Those waters of Subareas 2-33 and 2-34 north of a line drawn from 52°112 8283 N and 131°1526623 W east to 52°122269" N and 131°1425793 W. [Louscoone Estuary]

(3) Flamingo Estuary

Those waters of Subarea 2-37 north of a line drawn from 52°1425233 N and 131°222243 W southeast to 52°1422453 N and 131°2124813 W. [Flamingo Estuary]

(4) Gowgaia Estuary

Those waters of Subarea 2-41 east of a line drawn from 52°2429473 N and 131°322133 W southeast to 52°2422333 N and 131°3220213 W. [Gowgaia Estuary]

(5) Cape Saint James

Those waters of Subareas 2-19, 102-3, 130-3 and 142-1 inside a line commencing at 51°5625093 N and 131°0125473 W, southwest to 51°5524993 N and 131°0224683 W, then southeast to 51°5224933 N and 130°5729073 W, then south to 51°5126553 N and 130°5727803 W, the southeast to 51°5023953 N and 130°5625613 W, then northeast to 51°5120543 N and 130°5427023 W, then north to 51°5328263 N and 130°5526403 W, then northwest to 51°5825173 N and 130°5924683 W, and then west to 51°5827273 N and 131°0026203 W, and then to the point of commencement. [Cape Saint James]

(6) SGang Gwaay

Those waters of Subareas 2-31 and 142-1 inside a 3km radius from the centre point on Anthony Island located at 52°0526553 N and 131°1321783 W. [SGang Gwaay]

For more information on NMCAs, please visit:

<http://www.pc.gc.ca/eng/progs/amnc-nmca/index.aspx>

4.6.7 *Species at Risk Act*

The *Species at Risk Act* (SARA) came into force in 2003. The purposes of the *Act* are “to prevent wildlife species from being extirpated or becoming extinct, and to provide for the recovery of a wildlife species that are extirpated, endangered or threatened as a result of human activity and to manage species of special concern to prevent them from becoming endangered or threatened.”

In addition to the existing prohibitions under the *Fisheries Act*, it is illegal to kill, harm, harass, capture, take, possess, collect, buy, sell or trade any listed endangered or threatened animal or any part or derivative of an individual. These prohibitions apply unless a person is authorized, by a permit, licence or other similar document issued in accordance with SARA, to engage in an activity affecting the listed species or the residences of its individuals. Species listed as special concern are not included in these prohibitions.

To view the list of endangered, threatened, and special concern species currently listed under Schedule 1 of SARA, please visit:

http://www.sararegistry.gc.ca/species/schedules_e.cfm

The formal SARA legal listing process begins when the Minister of Environment issues a response statement, detailing how he intends to proceed with the COSEWIC species designations. Response statements can be found at:

http://www.sararegistry.gc.ca/sar/listing/response_e.cfm

Future Committee on the Status of Endangered Wildlife Species Assessments

COSEWIC was formed in 1977 to provide Canadians with a single, scientifically sound classification of wildlife species at risk of extinction. COSEWIC began its assessments in 1978 and has met each year since then to assess wildlife species.

With the implementation of SARA, COSEWIC has been established as an independent body of experts responsible for identifying and assessing wildlife species considered to be at risk. This is the first step towards protecting wildlife species at risk. Subsequent steps include COSEWIC reporting its results to the Canadian government and the public, and the Minister of the Environment's official response to the assessment results. Wildlife species that have been designated by COSEWIC may then qualify for legal protection and recovery under SARA.

For a full list of species identified and assessed by COSEWIC, please visit:
http://www.cosewic.gc.ca/rpts/Detailed_Species_Assessments_e.html

Whale and Leatherback Turtle Sightings

DFO welcomes assistance in the reporting of any whale or leatherback turtle sightings or entanglement. Sightings for leatherback turtles and many whale species are infrequent in Pacific Canadian waters, and the collection of sightings data is very useful to scientists in determining population size and distribution. Establishing this information can in turn help in the recovery planning under SARA.

To report a whale sighting, contact the BC Cetacean Sighting Network or BC Sea Turtle Sighting Network (see Contacts).

4.7 Aquaculture

In 2009, the British Columbia Supreme Court (BCSC) ruled that the activity of aquaculture is a fishery which falls under exclusive federal jurisdiction pursuant to sub-section 91(12) of the *Constitution Act, 1867* - Sea Coast and Inland Fisheries and, in effect, struck down substantial portions of the provincial regulatory regime governing aquaculture. In response to the BCSC decision, the Minister of Fisheries and Oceans has confirmed the commitment of the Government of Canada to establish a federal regulatory regime governing aquaculture pursuant to the *Fisheries Act* in the geographic area of British Columbia.

On December 19, 2010 DFO assumed the role of lead federal department for sustainable management of fisheries and aquaculture. Under the *Fisheries Act* the *Pacific Aquaculture Regulations* and the *Fishery General Regulations* will govern finfish, shellfish and freshwater aquaculture operations in BC. Cultivation of fish within the province will require a federal aquaculture licence issued under the *Pacific Aquaculture Regulations*, and, where applicable, a federal *Navigable Waters Protection Act* permit and a provincial Crown Lands tenure. Other government agency approvals may also be necessary.

To view the Pacific Aquaculture Regulations, beginning on page 2326:
<http://canadagazette.gc.ca/rp-pr/p2/2010/2010-12-08/pdf/g2-14425.pdf>

As part of the new aquaculture regulatory framework in British Columbia, DFO is developing Integrated Management of Aquaculture Plans (IMAPs). IMAPS will be modelled after Integrated Fisheries Management Plans, which are used to govern wild

harvest fisheries. Consultations with First Nations, interested parties, and stakeholders will be important to the IMAP development process, allowing for the integration of advice, as well as environmental and social interests, into the management objectives for each aquaculture sector.

For further information refer to the following web link: <http://www.dfo-mpo.gc.ca/aquaculture/aquaculture-eng.htm>

5 OBJECTIVES

5.1 National

DFO aims to:

- Meet conservation objectives and ensure healthy and productive fisheries and ecosystems;
- Base management decisions on the best available scientific information;
- Manage fisheries to provide opportunities for economic prosperity;
- Provide stability, transparency, and predictability in fisheries management and improved governance.
- Foster shared stewardship.

5.2 Pacific Region

The overall goal of Fisheries Management in the Pacific Region is the conservation of Canada's fisheries resources to ensure sustainable resource utilization and generate economic prosperity, accomplished through close collaboration with resource users and stakeholders based on shared stewardship consistent with treaty and Aboriginal rights. Fisheries Management is responsible for management of the Aboriginal, commercial, and recreational fishing in the Pacific Ocean and creating the conditions for a vibrant and innovative aquaculture industry.

Fisheries Management will continue to develop and implement the Sustainable Fisheries Framework by integrating the precautionary and ecosystem approach frameworks into IFMPs with the goal of protecting vulnerable marine and freshwater ecosystems and vulnerable stocks from significant adverse impacts, and to help ensure long term sustainability and support economic prosperity.

5.3 Pacific Herring Resource Management

Objectives for management of Pacific herring address stock conservation; ecosystem processes; consultation; social, cultural, and economic considerations, as detailed in the following subsections.

5.3.1 Stock Conservation

The biological objective is to only harvest the available biomass on a sustainable basis by applying management decision rules around recruitment and harvest rates.

5.3.2 *Ecosystem Processes*

To ensure conservation and protection of Pacific herring stocks, their habitat, and manage for ecosystem impacts of fish harvest activities will be ensured through the application of scientific management principles applied in a risk adverse and precautionary manner based on the best scientific advice available, and through comprehensive monitoring of fish harvest activities.

5.3.3 *Consultation*

An open and transparent consultation process will be developed and maintained for discussions of harvest management issues for the Pacific herring fishery, including the annual development of an IFMP, long-term direction of the fishery, and to increase information posted on the DFO consultation website to allow for wide review of all relevant material.

5.3.4 *Social, Cultural and Economic Considerations*

First Nations

DFO will continue to provide opportunities for First Nations to harvest fish for food, social, and ceremonial purposes, in a manner consistent with the *Sparrow Decision* (SCC 1990), and other court decisions.

For more information see Appendix 5 or visit:

www.pac.dfo-mpo.gc.ca/tapd/default_e.htm

Recreational

DFO will continue to provide opportunities for a recreational fishery for Pacific herring. For more information, see Appendix 6.

Commercial

DFO will work collaboratively with commercial fishery participants to:

- Provide reasonable fishing opportunities in a manner that ensures long-term sustainability of the resource.
- Monitor fish stocks and fish harvest to develop knowledge of the stock.

5.3.5 *Compliance*

- Key priorities for the Pacific herring fishery for DFO Conservation and Protection are:
- Ensure fisheries are promulgated in an orderly manner and in compliance with legislation and licence conditions.
- Ensure compliance with the herring fishery monitoring programs.
- Provide regular reports on enforcement and compliance for this fishery through the Record of Management Strategies report (RMS), the Fisheries Enforcement Activity Tracking System (FEATS), and through the Departmental Violation System (DVS).

For more information, see Appendix 11.

6 ACCESS AND ALLOCATION

The Minister can, for reasons of conservation or for any other valid reasons, modify access, allocations, and sharing arrangements as outlined in this IFMP in accordance with the powers granted pursuant to the *Fisheries Act*.

6.1 First Nations

Aboriginal harvest of herring for FSC purposes may occur coast wide where authorized by a communal licence. DFO will provide First Nations with priority access to the resource for FSC purposes, and FSC allocations for each Major Stock Assessment Area are determined through bilateral discussions.

6.2 Recreational

Recreational harvest of herring may occur coast wide, and requires a British Columbia Tidal Waters Sport Fishing licence. Herring may be fished for recreational purposes year-round. The daily maximum sport limit for herring is 20 kg, with a two-day possession limit of 40 kg.

6.3 Commercial

The TAC for herring in each Major and Minor Stock Assessment Area is based on the advice of DFO's Science Branch through the CSAS process, and is derived from estimates of annual stock biomass. After providing for FSC needs, a commercial TAC is set and distributed across the four herring fisheries by Fisheries Management, and proposed allocations are discussed with commercial fishery representatives through consultation. The annual distribution of TAC is presented as an expected use table, which may be viewed in Appendix 4.

7 MANAGEMENT MEASURES FOR THE DURATION OF THE PLAN

See Appendix 5 to 10 for information regarding the Aboriginal Fishing Plan, Recreational Fishing Plan, and Commercial Fishing Plans for each commercial herring fishery, including:

- Total Allowable Catch (TAC);
- Fishing Seasons/Areas;
- Closed Areas
- Control and Monitoring of Removals;
- Decision Rules;
- Licensing;
- Fishery Monitoring Programs.

8 SHARED STEWARDSHIP ARRANGEMENTS

There are no formal shared stewardship arrangements (e.g. JPAs) for herring in the Pacific Region. However, stakeholders work closely with Fisheries Management staff in pre-season, in-season, and post-season processes, providing expert knowledge and specialized experience to inform management decisions and cooperatively develop solutions to management issues. In addition, the HCRS plays a strong role in annual management of the roe herring fishery by conducting the test fishery program each year, and has made significant contributions over time to support research in the area of stock identification.

9 PERFORMANCE / EVALUATION CRITERIA

9.1 National

- Pacific herring conservation objectives are met such that fisheries and ecosystems are healthy and productive.
- Reasonable effort has been made to provide opportunities for economic prosperity and still maintain conservation objectives.
- Consultation and management processes are stable, transparent, and predictable.

9.2 Pacific Region

- Execution of the Pacific herring fisheries in accordance with the requirements outlined in the integrated fisheries management plan (IFMP).
- Ensure monitoring program provides accurate information on catch and effort and is designed to provide information necessary for effective management of the herring resource.
- Proper controls in place for management and control of the fisheries and the conservation and protection of fish.
- Stakeholder engagement for informed management decisions and cooperatively developed solutions to issues related to management of Pacific herring fisheries.

9.3 Pacific Herring Resource Management

9.3.1 Stock Conservation and Ecosystem Processes

- Application of a conservative harvest rate to a maximum of 20% to each of the available major stock assessment regions and 10% of the predicted minor stock area spawning stock biomass.
- Collection of accurate and timely catch, effort, landings, and other relevant information (e.g. marine mammal and seabird encounters) by geographic location and time period.
- Enact and enforce regulations through licences and licence conditions.
- Monitor compliance of the various herring monitoring programs funded by individual licence eligibility holders.

- Through biological sampling information collect data to assist in management decisions and monitor size and age distribution of herring caught.

9.3.2 *Consultation*

- Hold pre-season planning meetings and seek stakeholder and First Nations advice on development of the IFMP allowing 30 days for review and feedback on IFMP draft content.
- Facilitate consensus building among stakeholders on issues related to the management of the fishery.
- Hold post-season meetings to review issues encountered and to develop options for addressing and resolving them.

9.3.3 *Social, Cultural, and Economic Considerations*

First Nations

- DFO will consult with First Nations in order to determine their FSC requirements. In accordance with the *Sparrow Decision* (SCC 1990), and other court decisions, First Nations will be authorized to fish for FSC purposes through use of a communal licence.

Commercial

- Through post-season reviews and data analysis, assess catch monitoring, management measures, timing of fishing season, and fishing areas.

REFERENCES

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GLOSSARY

Aboriginal Traditional Knowledge (ATK)	Knowledge that is held by, and unique to Aboriginal peoples. It is a living body of knowledge that is cumulative and dynamic and adapted over time to reflect changes in the social, economic, environmental, spiritual, and political spheres of the Aboriginal knowledge holders. It often includes knowledge about the land and its resources, spiritual beliefs, language, mythology, culture, laws, customs and medicines.
Abundance	Number of individuals in a stock or a population.
Age Composition	Proportion of individuals of different ages in a stock or in the catches.
Area and Subarea	Defined in Section 2 of the Pacific Fishery Management Area Regulations. A map of Pacific Fishery Management Areas is available on the Department's Internet site at: www.pac.dfo-mpo.gc.ca/ops/fm/Areas/areamap_e.htm
Biomass	Total weight of all individuals in a stock or a population.
By-catch	The unintentional catch of one species when the target is another.
Canadian Science Advice – Pacific (CSAP)	Formerly named PSARC, CSAP is the Pacific Regional body responsible for review and evaluation of scientific information on the status of living aquatic resources, their ecosystems, and on biological aspects of stock management.
Canadian Science Advisory Secretariat (CSAS)	Coordinates the peer review of scientific issues for DFO.
Catch Validation Program	A program designed to monitor, record, and verify catches.
Committee on the Status of Endangered Wildlife in Canada (COSEWIC)	Committee of experts that assess and designate which wild species are in some danger of disappearing from Canada.
Communal Commercial Licence	Issued to First Nation organizations pursuant to the Aboriginal Communal Fishing Licences Regulations for participation in the general commercial fishery. Licences issued are equivalent to the capacity of licences that have been retired under the Treaty and Aboriginal Policy Directorate Licence Retirement/Allocation Transfer Program.
Communal Licence	A licence issued to First Nations organizations under Section 4 of the Aboriginal Communal Fishing Licences Regulations, pursuant to the Fisheries Act, to carry on fishing and related activities.
Container	A bag, box, tray, tote, frozen block or anything that contains fish, but not a herring enclosure.

Cut-off	In Major Stock Assessment areas, the Cut-off levels are established at 25% of the unfished biomass, as determined by simulation analyses. Areas are recommended to be closed to commercial fishing when the stock is forecast to be below the Cut-off.
Designated service provider	A private sector company authorized by the Department to collect and collate information for the purpose of assisting vessel masters in meeting their conditions of licence with regards to reporting of information.
DFO	Department of Fisheries and Oceans (Canada).
Dockside Monitoring Program (DMP)	A monitoring program that is conducted by a company that has been designated by the Department, which verifies the species composition and landed weight of all fish landed from a commercial fishing vessel.
Ecologically and Biologically Significant Area (EBSA)	An EBSA is an area that has particularly high Ecological or Biological Significance, and should receive a greater-than-usual degree of risk aversion in management of activities in order to protect overall ecosystem structure and function within the LOMA.
Ecosystem-Based Management	Taking into account of species interactions and the interdependencies between species and their habitats when making resource management decisions.
Encounter	An interaction between a marine mammal or sea bird and fishing gear (including herring enclosures). Encounters are described as a system breach, accidental drowning, or entanglement and must be reported as soon as an encounter is discovered to the DFO Reporting Hotline (1-800-465-4336).
Entanglement	An entanglement occurs when a marine mammal or sea bird is caught, ensnared in the infrastructure (nets) of a herring enclosure or fishing gear which results in drowning.
Fishing Effort	Quantity of effort using a given fishing gear over a given period of time.
Fishing Mortality	Death caused by fishing, often symbolized by the mathematical symbol F.
Food, Social and Ceremonial (FSC)	A fishery conducted by Aboriginal groups for food, social and ceremonial purposes.
Harvest Quotas	A fixed amount of catch provided as an opportunity for harvest to a licensed party or vessel.
Herring Industry Advisory Board (HIAB)	An advisory body comprised of representatives from the commercial herring sector.

Herring Conservation and Research Society (HCRS)	A non-profit society formed to promote and enhance the conservation of herring stocks on the west coast of Canada.
Integrated Herring Harvest Planning Committee (IHHPC)	A representative cross-sectoral advisory process for integrated harvest planning and post-season review.
Intertidal	The area of the ocean shoreline located between the highest high water and lowest low water tidal levels.
Landed Value	Value of the product when landed by the licensed vessel.
Landing	Quantity of a species caught and landed. Harvested fish transferred from a vessel to land.
Large Ocean Management Area (LOMA)	Integrated management planning in Canada is focused in five high priority LOMAs, these are: Placentia Bay and the Grand Banks, the Gulf of St. Lawrence, the Scotian Shelf, the Beaufort Sea and the Pacific North Coast.
Maximum Sustainable Yield (MSY)	Largest average catch that can continuously be taken from a stock.
Natural Mortality	Mortality due to natural causes, symbolized by the mathematical symbol M.
Observer	An individual who has been designated as an Observer by the Regional Director General for the Pacific Region of DFO pursuant to section 39 of the Fishery (General) Regulations and in the employ of a service provider company that has been certified by the Canadian General Standards Board (CGSB) for Dockside Monitoring.
Observer Coverage	When a licence holder is required to carry an officially recognized observer onboard their vessel for a specific period of time to verify the amount of fish caught, the area in which it was caught and the method by which it was caught.
Pacific Fishery Licensing Unit (PFLU)	DFO offices which receive, process, and issue fishery licence applications. For more information on PFLUs, please visit: http://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/index-eng.htm
Pelagic	Living in the surface or middle depths of the sea.
Population	Group of individuals of the same species, forming a breeding unit, and sharing a habitat.
Precautionary Approach	Set of agreed cost-effective measures and actions, including future courses of action, which ensures prudent foresight, reduces or avoids risk to the resource, the environment, and the people, to the extent possible, taking explicitly into account existing uncertainties and the potential consequences of being wrong.

Recruitment	Amount of individuals becoming part of the exploitable stock e.g. that can be caught in a fishery. The process whereby young animals are added to a fishable stock or population.
Research Survey	Survey at sea, on a research vessel, allowing scientists to obtain information on the abundance and distribution of various species and/or collect oceanographic data. E.g.: bottom trawl survey, plankton survey, hydroacoustic survey, etc..
Sampling Program	A program in which representative samples of animals are collected for the calculation of parameter estimates that describe such things as weight, length or age within the general population.
Spawner	Sexually mature individual.
Spawning Stock	Sexually mature individuals in a stock.
Species at Risk Act (SARA)	The Act is a federal government commitment to prevent wildlife species from becoming extinct and secure the necessary actions for their recovery. It provides the legal protection of wildlife species and the conservation of their biological diversity.
Stakeholders	Individuals or groups with an interest in a particular fishery or activity.
Stock	Describes a population of individuals of one species found in a particular area, and is used as a unit for fisheries management.
Stock Assessment	Scientific evaluation of the status of a species belonging to a same stock within a particular area in a given time period. Results of analyses of fisheries and research data used to evaluate the effects of fishing on a stock or population and to predict the reactions of populations to alternative management choices.
Stock Assessment Area	Stock assessment groupings used since 1993 by the PSARC to monitor, assess, forecast and harvest herring.
Substrate	The ground (often the ocean bottom) and its composition, in or on which animals live.
Subtidal	A portion of the bottom of the ocean that is not exposed at low tide stages. The ocean bottom at elevations below low water or chart datum.
Ton	Short ton, 2000 lbs., traditionally used as a unit of measure by fish harvesters in British Columbia.
Tonne	Metric tonne, which is 1000kg or 2204.6 lb.
Total Allowable Catch (TAC)	Total allowable catch: the amount of catch that may be taken from a stock, determined by analytical procedures, to achieve management objectives.
Total Validated Landings	The sum of all landed herring which have been validated by the Validation Program.

Traditional Ecological Knowledge (TEK)	A cumulative body of knowledge and beliefs, handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment.
Validation	The verification, by an observer, of the weight of fish landed.
Year-class	Individuals of a same stock born in a particular year. Also called "cohort".

APPENDIX 1. POST-SEASON REVIEW

Resource Management Performance Evaluation

Stock Conservation and Ecosystem Processes

Performance Measure	DFO Activity
Application of a conservative harvest rate to a maximum of 20% to each of the available major stock assessment regions and 10% of the predicted minor stock area spawning stock biomass.	The herring harvest control rules were applied as per recommendations received by DFO Science. Herring stocks are managed with a fixed 20% harvest rate, in conjunction with a fishing Cutoff level of 25% of the unfished biomass. Areas with stocks forecast below the Cutoff were closed to commercial fishing. See Table 2.
Collection of accurate and timely catch, effort, landings, and other relevant information (e.g. marine mammal and seabird encounters) by geographic location and time period.	Each of the four herring fisheries was monitored by an industry-funded monitoring program which collects information on each of the above listed metrics and provides regular updates to DFO throughout the fishing season.
Proper management and control of fisheries through legislation and licence conditions.	Management and control of fisheries was undertaken.
Monitor compliance of the various herring monitoring programs funded by individual licence eligibility holders.	Lead resource managers and C&P staff worked closely with the service provider and industry to monitor compliance of the monitoring programs throughout the fishing season.
Through biological sampling information collect data to assist in management decisions and monitor size and age distribution of herring caught.	Fisheries Management coordinated with Science and industry to collect biological samples through the test-fishing program and other opportunities to augment samples collected through scientific surveys.

Table 2: Management decisions for 2010/11 harvest opportunities in major and minor stock assessment areas (short tons)

Area	2010/11			TAC	Management Decision
	Recruitment Forecast	Forecast	Cut-Off		
2W	Average	2,791	NA	279	Area is open to commercial fishing at a 10% harvest rate
HG	Poor	4,564	11,795	0	Area remains closed to commercial fishing

Area	2010/11 Recruitment Forecast	Forecast	Cut-Off	TAC	Management Decision
PRD	Average	21,134	13,338	4,226	Area is open to commercial fishing at a 20% harvest rate
CC	Poor	7,026	19,401	0	Area remains closed to commercial fishing
SOG	Good	75,934	23,369	15,186	Area is open to commercial fishing at a 20% harvest rate
WCVI	Average	9,676	20,723	0	Area remains closed to commercial fishing
Area 27	Average	1,031	NA	104	Area is open to commercial fishing at a 10% harvest rate

Consultation

Performance Measure	DFO Activity
Seek stakeholder and First Nations advice on development of the IFMP allowing 30 days for review and feedback on IFMP draft content.	<p>Stakeholders were consulted through the Integrated Herring Harvest Planning Committee (IHHPC), which was convened on September 16, 2010; and October 14, 2010 for pre-season planning and review of the draft IFMP.</p> <p>Lead resource managers conducted additional consultation on more specific issues directly with industry representatives throughout the year. In September and October, consultation with First Nations on the draft IFMP was conducted by Area Staff as well as through the IHHPC.</p> <p>The IFMP was made available on the DFO Consultation website for a 30 day public review before approval, of which stakeholders were notified via email and Fisheries Notice.</p>
Facilitate consensus building among stakeholders on issues related to the management of the fishery.	<p>Facilitated through IHHPC, First nations consultations and HIAB consultations.</p> <p>Collect input and consider in decision-making.</p>

Performance Measure	DFO Activity
	Expected use table
Hold post-season meetings to review issues encountered and to develop options for addressing and resolving them.	On May 5, 2011, the IHHPC convened for a post-season review to examine challenges encountered during the fishing season and develop options and ideas to resolve those challenges in future seasons.
Post meeting notes and meeting presentations as soon as is possible following consultation meetings.	Meeting notes, presentations, and other materials were made available on the DFO consultation website within 30 days of each meeting.

Social, Cultural, and Economic Considerations

First Nations

Performance Measure	DFO Activity
DFO will consult with First Nations in order to determine their FSC requirements. In accordance with the Sparrow Decision (SCC 1990), and other court decisions, First Nations will be authorized to fish for FSC purposes through use of a communal licence.	DFO consulted with First Nations in meetings and in bilateral discussions in the fall of 2010. First Nations were issued Communal Fishing Licences to authorize fishing for herring and spawn on kelp or boughs. Meetings were also held in-season and post-season to review and discuss issues and concerns.

Commercial

Performance Measure	DFO Activity
Through post-season reviews and data analysis, assess catch monitoring, management measures, timing of fishing season, and fishing areas.	The IHHPC meets annually each April to conduct a post-season review of the fishery. In addition, DFO meets with HIAB to discuss the roe herring fishery performance in detail, and undertakes further consultations with other industry stakeholders. At this time, a review of the catch monitoring program is also performed with the Service Provider.

Season Summaries

Roe Herring

Seine Fishery

	Strait of Georgia	Prince Rupert District
Expected Use	7,715 tons	1000 tons
Quota Issued	7,715 tons	1000 tons
Landings	0 tons	973 tons
# Pools	13	1
# Licences	238	10
Tons per licence	32.416 tons	100 tons
Open	Fishery did not open	Mar. 25, 2011 11:45h
Closed	-	Mar. 27, 2011 21:15h

Gillnet Fishery

	Strait of Georgia	Prince Rupert District
Expected Use	5,785 tons	1,346 tons
Quota Issued	5,785 tons	1,346 tons
Landings	4,868 tons	1,392 tons
# Pools	36	8
# Licences	1133	95
Tons per licence	5.106 tons	14.168 tons
Open	Mar. 13, 2011 11:00h	Mar. 26, 2011 09:00h
Closed	Mar. 22, 2011 14:00h	Mar. 29, 2011 15:00h

Spawn on Kelp

	Area 2W	Prince Rupert District	Areas 12 & 27
Quota Issued	0 lbs	144,800 lbs	52,089 lbs
Landings	0 lbs	123,626 lbs	51,333 lbs
# Licences	5 drawn, all declined	8	3
Lottery Date	Dec. 16, 2010	-	-
# of closed ponds	-	22	3
# of open ponds	-	-	3
Location(s)		Kitkatla, Big Bay, Hunt Inlet, Butler Cove, Tugwell Island	Winter Harbour, Daphne Point

Food and Bait

	Strait of Georgia	Prince Rupert District
Quota	300 tons	50 tons
Landings	283 tons	-
# Licences Available	6	1
Tons per licence	50 tons	50 tons
# Licences Issued	6	0
Lottery Date	Oct. 28, 2010	Oct. 28, 2010
Location(s)	Danger Reef, Yellow Point	-

Pilot Program to Allow Reallocation of Unfished Quota in the SOG

In 2010/2011, this program was continued to permit reallocation of quota to a vessel that requires additional quota to cover small amounts of catch in excess of the vessel quota amount.

Special Use

Note that because the Special Use season runs from November 7, 2010 to November 6, 2011, and landings may occur up to December 1, 2011, a complete post-season review is not possible until the end of the calendar year.

Allocation, quota issued, and landings by licence category.

Licence	Category	Area	Expected Use	Quota Issued	Landings
ZX	Personal Use	SOG	25	7	n/a
		PRD	10	0	0
ZY1	Sport Bait	SOG	517	402	256
		PRD	50	0	0
ZY2	Commercial Bait	PRD	70	0	0
ZY3	Human Food & Bait	SOG	150	n/a	n/a
ZY4	Zoo & Aquarium	SOG	110	n/a	n/a
			932	669	503

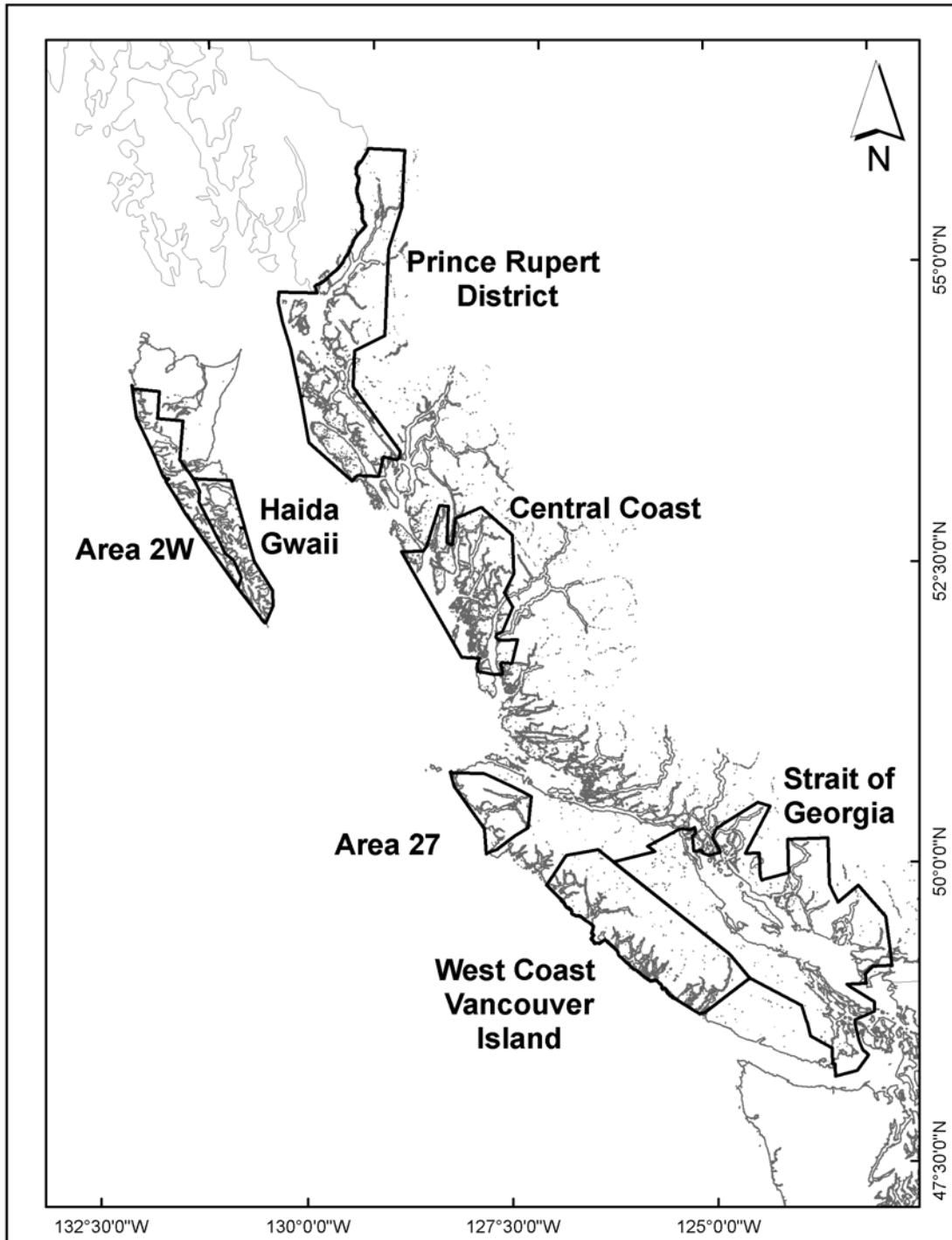
Number and location of ponding operations

	Fresh/Frozen	Live	Total	Comments
# of ponding operations	2	1	3	
Pond locations	Area 13-7 (Deepwater Bay)	Area 16 (Secret Cove)		
# of ponds	6	1	7	
# of ponds per operator	1 to 5	1		
Size of Ponds	Large: 100x100x50 feet (500,000 cubic feet) Medium: 50x50x50 feet (125,000 cubic feet)	Small: 10x20x12 feet (2,400 cubic feet) or less		Majority of ponds are medium in size

Number of vessels, licences issued, and licence eligibility holders

Licence	Number of Vessels	Number of Licences	Number of Licence Eligibility Holders
ZX	7	7	7
ZY1	4	35	12
ZY3	1	3	1
ZY4	1	1	1
Totals	13	46	21

APPENDIX 2. MAP OF FISHING AREA



APPENDIX 3. STOCK ASSESSMENT RESULTS

Forecasting the potential catch that can be safely removed from our herring stocks requires an assessment of current abundance and an understanding of the factors affecting their dynamics. Herring are strongly affected by annual variations in environmental conditions, which produce large fluctuations in recruitment and subsequent stock abundance. An assessment of current abundance for all stock areas is obtained using an updated version of the herring catch-age model (HCAMv2) called ISCAM. Estimates of pre-fishery biomass are projected based on estimated survival, growth and recruitment, to forecast abundance for 2012. The herring assessment model is driven by four sources of data: commercial catch landings, a spawn survey index, age composition data and weight at age, for the period of 1951-2011.

Stock Assessment Summary for the Current Year

Herring abundance has remained relatively stable over the past few years, increasing slightly in all areas except Prince Rupert (PRD). Abundance increased substantially in the Strait of Georgia with a strong recruitment of fish from the 2008 year-class. The coast wide estimated 2011 pre-fishery biomass for the five major stock assessment areas was 217,632 metric tonnes (239,898 short tons), a 47% increase over the 2010 pre-fishery biomass of 148,425 metric tonnes (163,611 short tons). Recruitment of the 2008 year class in 2011 was good for the Haida Gwaii (HG) and Strait of Georgia (SOG) stocks, average for the Central Coast (CC) and Prince Rupert District (PRD) stocks, and poor for the West Coast of Vancouver Island (WCVI).

The combined 2011/12 forecast biomass for the five major stock assessment areas is 208,758 metric tonnes (230,116 short tons). The 2011/12 forecast biomass for the minor stocks, Area 2W and Area 27, are 5,398 and 1,124 metric tonnes (5,950 and 1,239 short tons), respectively (Table 1).

Table 1: CSAP Recommended Harvest Table for 2011/12.

Area	2011/12 Recruitment Forecast	Forecast		Cutoff		Maximum Recommended Yield	
		Metric tons	Short tons*	Metric tons	Short tons*	Metric tons*	Short tons*
HG	Poor	9,618	10,602	10,436	11,504	0	0
PRD	Average	27,492	30,305	19,641	21,650	5,498	6,061
CC	Poor	11,357	12,519	15,600	17,196	0	0
SOG	Good	138,448	152,613	35,013	38,595	27,690	30,523
WCVI	Poor	15,321	16,889	14,894	16,418	427	471
Area 2W	Average	5,398	5,950	n/a	n/a	540	595
Area 27	Average	1,124	1,239	n/a	n/a	112	123
Total		208,758	230,116			34,267	37,773

**Rounded to nearest integer.*

Commercial harvest is only recommended in areas that are above cut-off. For the 2012 fishing year, forecast returns are above cut-off in the SOG and PRD stocks only. Yield recommendations for these stocks are calculated using a 20 percent harvest rate. A ten percent harvest rate is applied to Areas 2W and 27.

Data Sources for the Current Year

During the 2010/11 season a total of 248 biological samples were collected, of which 57 were collected from the roe fishery, 20 from the food & bait fishery, 4 from spawn on kelp operations, 151 from the test fishery and 16 from research surveys. Each “sample” collected is comprised of approximately 100 fish.

APPENDIX 4. EXPECTED USE TABLE

Based on the Centre for Science Advice - Pacific (CSAP) Recommended Harvest and input from stakeholder consultations, the expected use of herring for 2011/12 in short tons is as follows for each of the stock assessment areas and fisheries (for Roe Herring as Total Allowable Catch –TAC):

Table 3: Fisheries Management Expected Use Table for 2011/12 (short tons).

AREA	Recruitment	CSAP Max Yield (T)	FSC	ROE HERRING		SOK		WINTER FOOD & BAIT (ZM)	SPECIAL USE					TOTAL NON-ROE	TOTAL ALL
				MAX. AVAIL-ABLE TAC	TAC LEVEL	J-LICENCE	COMM COM		PERS'L USE BAIT (ZX)	SPORT BAIT (ZY1)	COM'L BAIT (ZY2)	HUMAN FOOD (ZY3)	ZOO & AQUA (ZY4)		
Area 2W	Average	595				600								600	600
HG	Poor	0	150											150	150
PRD	Average	6,060	600	4,270	1,500	1,000		60	10	50	70			1,790	3,290
Area 10															
CC	Poor	0	600											600	600
Area 12						100								100	100
SOG	Good	30,523	35	23,686	11,500			6,000	25	517		150	110	6,837	18,337
Area 27	Average	123				105								105	105
WCVI	Poor	471	150			300								150	150
Total Minor		718	0	0	0	805	0	0	0	0	0	0	0	805	805
Total Major		37,054	1,535	27,956	13,000	1,300	0	6,060	35	567	70	150	110	9,527	22,827

APPENDIX 5. ABORIGINAL FISHING PLAN

DFO is committed to improving its relationship with Aboriginal people. Aboriginal fisheries play an important role in this relationship and, therefore, are an integral part of fisheries resource management in the Pacific Region.

Through the Aboriginal Fisheries Strategy, DFO seeks to negotiate with Aboriginal organizations access for Food, Social, and Ceremonial (FSC) purposes. Subject to conservation, this access has priority over access for commercial and recreational harvest. FSC fisheries are managed through communal licences that are issued to First Nations organizations. The Department will consult with First Nations organizations to determine appropriate levels of access. In some cases, a portion of a PFMA may be closed to fishing except for FSC fishing by a First Nation organization. These closures may be for the season or for specified times. Whenever possible, the appropriate annual fishing plan will identify such closures. It is possible that situations may arise in the implementation of the plan where in season closure adjustments will be required to ensure access to the fishery by First Nations organizations for FSC purposes.

For additional information on DFO's Treaty and Aboriginal Fisheries programs, please visit:

www.pac.dfo-mpo.gc.ca/tapd/default_e.htm

Maa-nulth First Nations Domestic Fishery

The Maa-nulth First Nations Domestic Fishery (for food, social and ceremonial purposes) under the Maa-nulth First Nations Final Agreement (MFA) came into effect on April 1, 2011.

A Joint Fisheries Committee (JFC), established under the MFA, is made up of representatives of Canada (DFO), the Maa-nulth First Nations and British Columbia. Maa-nulth Fisheries Operation Guidelines will set out the operational principles, procedures and guidelines regarding the implementation of the provisions of the Fisheries Chapter of the MFA. The JFC may discuss possible provisions for an Annual Fishing Plan (AFP) before the Maa-nulth First Nations develop an AFP and possible provisions for Maa-nulth Harvest Documents.

Each year, the Maa-nulth First Nations will develop an AFP for the harvest of fish under the MFA. The AFP will set out the preferences of the Maa-nulth First Nations as to: stocks and species to be harvested, location and timing of harvest, method of harvest, monitoring and reporting of harvest, enforcement measures, and other matters. The AFP is submitted to the JFC for review. On receipt of an AFP, the JFC will review and make recommendations to the Minister and the Maa-nulth First Nations in respect of provisions that the Minister should put in a Maa-nulth Harvest Document.

Where the Minister issues a Maa-nulth Harvest Document, the Minister will take into account: conservation measures and the availability of fisheries resources; the recommendations of the JFC; utilization of the fisheries resources; efficient and effective harvesting of fisheries resources; requirements for integration and efficient management

of all resources; accepted scientific procedures for management for fisheries resources; and any other matters that the Minister considers relevant.

The Domestic Allocation for herring under the Maa-nulth First Nations Final Agreement is:

Each year the Maa-nulth Fish Allocation for whole herring is 90 short tons or a corresponding amount of herring spawn on kelp or herring spawn on boughs in accordance with the conversion rates for whole herring to herring spawn on kelp or herring spawn on bough as described in the Maa-nulth Fisheries Operational Guidelines.

More information on the MFA can be found at: <http://www.bctreaty.net/>

APPENDIX 6. RECREATIONAL FISHING PLAN

The recreational harvest of various fish and invertebrate species in BC is regulated via the *British Columbia Sport Fishing Regulations, 1996* made under the *Fisheries Act*. A DFO Tidal Waters Sport Fishing licence is required for the recreational harvest of all species of fish. The daily maximum sport limit for herring is 20 kg, with a two-day possession limit of 40 kg. Recreational harvesting may occur by means of dip net, herring jig, herring rake, or cast net.

The regulations for recreational fishing of finfish are summarized in the British Columbia Tidal Waters Sport Fishing Guide which lists closed times, bag limits, size limits (where applicable) and closed areas. When required, Fishery Notices are issued to advise of changes to this guide. For more information on the recreational fishery refer to the following web link:

http://www.pac.dfo-mpo.gc.ca/recfish/default_e.htm

The primary consultative body for the recreational fishing community is the Sport Fishing Advisory Board (SFAB). The SFAB has representatives from all parts of the community including the British Columbia Wildlife Federation and the Sport Fishing Institute of British Columbia. If you have any questions or need further information, please contact a recreational fisheries co-coordinator or a local DFO office (see Contacts).

APPENDIX 7. COMMERCIAL FISHING PLAN FOR ROE HERRING

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1 PURPOSE

This document is a Commercial Fishing Plan for roe herring in British Columbia, for the period from February 10, 2012 to April 30, 2012.

2 OVERVIEW

Commercial roe herring are fished for the roe (eggs), which is a highly valued delicacy in Japan. The fishery takes place as the herring move into the shallow inland waters to spawn from late February to mid April. Herring spawn earliest in southern BC, and progressively later at higher latitudes. Opening dates and times for the commercial fishery are announced on the fishing grounds once the roe has matured to optimum quality. The commercial roe herring fishery may occur in five areas which correspond to the major stock assessment regions: Haida Gwaii (HG previously Queen Charlotte Islands), Prince Rupert (PRD), Central Coast (CC) Strait of Georgia (SOG) and west coast of Vancouver Island (WCVI). Commercial roe herring fisheries are only planned in areas where the stocks are forecast to be above the commercial fishing cutoff, and depend on available abundance. Stock forecasts are provided on an annual basis by the Centre for Scientific Advice – Pacific (CSAP). Specific fishing timing and locations are determined by major concentrations of fish and the potential for the highest roe yield.

A roe herring seine license (category HS or FHS) or herring gill net license (category HG or FH) is required to participate in the commercial roe herring fishery. Licence eligibilities are limited to 252 seine and 1,268 gill net party-based licences. For each area where there will be a fishery in a given year, the licences are grouped into pools by area and gear type, for management purposes. This pool fishery structure was established in 1998 to address fishery concerns and improve fishery quota compliance.

3 HERRING FISHERY REPRESENTATION

The Herring Industry Advisory Board (HIAB) provides advice on issues affecting commercial Roe Herring, and Food and Bait fisheries. This role includes submitting recommendations for Roe Herring harvesting plans for all areas with a Roe Herring TAC. The HIAB has 10 seats on the Integrated Herring Harvest Planning Committee (IHHPC). The 10 participants are selected by the Roe Herring sector from a pool of: (a) 10 individuals elected by Roe Herring Licence holders (5 seine and 5 gill net); (b) 4 appointed processors; and (c) 5 appointed individuals representing: the United Fishermen and Allied Workers Union; the Native Brotherhood of BC; the Aboriginal Fishing Vessel Owners Association; the Fishing Vessel Owners Association, and the Herring Conservation & Research Society (HCRS).

4 FINANCIAL RESPONSIBILITIES

4.1 Fishery Monitoring Program

All commercial roe herring licence holders contribute to the funding required for a fishery monitoring program of hauls and 100% dockside weight validation of all roe herring landings. This program is administered by the Herring Conservation and Research Society (HCRS). Planning for the fishery monitoring program service provider is underway, in recent years this service has been provided by J.O. Thomas and Associates (Telephone: 604 291-6340).

4.2 Roe Quality Testing Program

The roe quality testing program is recognized by DFO as an important aspect for the financial success of roe herring participants. Since 2008 the roe herring sector has planned and delivered the on grounds roe herring quality assessment program, and it is anticipated that this program will continue for the 2012 season. This program is administered by the HCRS.

5 MANAGEMENT MEASURES FOR THE DURATION OF THE PLAN

5.1 Changes from Previous Season

Other than quota allocations by area, there are no significant changes in this commercial plan from the previous season.

5.2 Allocation and Harvest Levels

The Department will provide reasonable fishing opportunities for seines and gillnets in each management area where fishing opportunities have been identified. The coast wide total allowable catch (TAC) for the roe herring fishery will be 13,000 short tons. The available harvest will be allocated between seines and gillnets on a 55:45 coast wide basis.

Fishery set up will be focused on the major bodies of fish in the area. Fishery openings will not be extended into sensitive areas, or maintained for an indefinite time period. Closures may be implemented if fish of unacceptable quality are prevalent. The Department has no obligation and provides no assurance or guarantee to participants that the maximum or any amount of fish allowed under a licence will be harvested.

5.2.1 Haida Gwaii (formerly Queen Charlotte Islands)

The stock abundance levels are forecasted to be below the Cutoff level. DFO is implementing a precautionary management regime and no roe herring commercial harvesting will be permitted.

5.2.2 *West Coast Vancouver Island*

The stock abundance levels are slightly above the Cutoff level. DFO is implementing a precautionary management regime and no roe herring commercial harvesting will be permitted.

5.2.3 *Central Coast*

In the Central Coast major stock assessment area, stock abundance levels are forecasted to be below the commercial Cutoff level and DFO is implementing a precautionary management regime and no roe herring commercial harvesting will be permitted.

5.2.4 *Prince Rupert*

The Prince Rupert District has a CSAP maximum recommended catch for the roe herring fishery of 4,270 short tons. The recommended commercial roe herring quota has been set at 1,500 short tons.

5.2.5 *Strait of Georgia*

The Strait of Georgia has a CSAP maximum recommended catch to the roe herring fishery of 23,686 short tons. The recommended commercial roe herring quota has been set at 11,500 short tons.

5.3 Catch target, licence distribution, and quota table

The expected use of herring for commercial roe herring fisheries for 2012 for each of the stock assessment areas is described in the following table. Also provided is the number of tons per licence and gear type, provided the areas selected by licence holders matches the ideal number, which is an equitable proportion of the licences per area based on the 55:45 gear split and quota for the area. The actual licence quota will be based on the number of licences that select to fish in a specific area. The quota and ideal numbers will be adjusted based on the actual numbers of commercial seine and gillnet licences that will be available for issuance, and may not include licences held by DFO in PICFI or ATP inventories. The final number of licences, ideal distribution, and quotas by gear type will be provided by way of Fishery Notice prior to the licence area selection deadline.

Table 1: Roe herring catch targets (short tons) and ideal licence distribution by gear type and area

Licence Area	Total Roe	Catch Target (Tons)	Seine		Gill Net		
			Fishing Area	Ideal #	Catch Target (Tons)	Fishing Area	Ideal #
Haida Gwaii (HG)	0	0		0	0		0
Prince Rupert (PRD)	1,500	500	5	18	1,000	3 and 4	216
West Coast Van. Is. (WCVI)	0	0		0	0		
Strait of Georgia (SOG)	11,500	6,650	14 to 18	234	4,850	14 to 18	1052
Central Coast (CC)		0			0		
TOTAL	13,000	7,150		252	5,850		1,268
Tons/Licence		34.583			5.624		

5.4 Open Times

The commercial fishing plan for roe herring is in effect from February 10, 2012 to April 30, 2012. Fisheries will be timed to coincide with major bodies of fish that are acceptable to industry in terms of roe maturity and fish size. Areas will be opened to seine or gillnet gear in specific areas and at specific times by way of Variation Order made under the authority of the *Fishery (General) Regulations*. Historically, fishing begins in early March and finishes by early April. DFO will continue to provide the commercial sector opportunity to achieve optimum roe quality within the bounds of maintaining management control and sound conservation principles. It is the intention of DFO to open roe herring fisheries in consultation with the on-grounds industry advisors to provide reasonable fishing opportunities. Safety of the fleet and weather conditions will be taken into consideration in the conduct of fisheries, including the determination of a fishery opening.

5.5 Fishery Openings

5.5.1 Areas

The following areas are identified as fishing areas:

1. Strait of Georgia: PFMA 14 to 18
2. Prince Rupert: PFMA 3, 4, and 5

Openings are subject to in season decisions on specific areas that will be opened by Variation Order following the process as described by gear type and area, and subject to the permanent area closures detailed in the following section.

Fishery managers will endeavor to ensure that sensitive herring spawning areas are protected from gear damage by establishing shallow water net boundaries inside which no fishing shall take place. Herring spawning grounds may be designated under Section

41(1) of the Pacific Fishery Regulations, 1993. Vessels shall not anchor or transfer herring within a designated herring spawning ground.

The fleet is requested to avoid excessive disturbance of herring caused by vessels running back and forth over schools prior to openings. In some cases, specific requests to stay off particular areas will be broadcast from patrol vessels and fish harvesters will be expected to comply. The fleet is also requested to avoid locations where local First Nations are gathering fish, place spawn on boughs or spawn on kelp.

5.5.2 Decision Rules for Opening Seine Fisheries

Strait of Georgia: The opening time for seines will be decided by the on-grounds fishery managers in consultation with pools. If necessary, an opening will be determined by polling each pool captain. In this situation, each pool carries the weight of the number of licences in the pool.

Prince Rupert: The opening time for seines will be determined by the on-grounds manager in consultation with pool representatives.

5.5.3 Decision Rules for Opening Gill Net Fisheries

Strait of Georgia: The designated representative of HIAB will contact the nine gill net advisors identified by the roe herring sector. The opening of the fishery will be based on the advice received from the advisors through the designated representative of HIAB to the gill net fishery manager. There may be no in-season advisory meetings with pool fishery captains or gill net advisors.

Prince Rupert: The gill net fishery manager will attempt to contact the nine gill net advisors identified by HIAB, and will open the area based on the advice received from the advisors that were contacted. If a gill net fishing opportunity presents itself at a time when the majority of the fleet is not in the area, the Department will, if practical, seek the advice of as many of the nine gill net representatives they are able to contact before deciding whether to open the area. Notice of closures will be announced promptly, as required for conservation purposes. Notice will be sufficient to provide a reasonable opportunity for fish harvesters to remove their fishing gear from the water.

5.6 Closed Areas

Strait of Georgia Closed Areas

Area closures are detailed below. These areas are closed due to navigation concerns, sensitive fish habitat, or concerns regarding bycatch of other species. There may be additional closures in season by Variation Order and fishery notice depending on the circumstances.

PFMA 14-14: Comox Harbour

PFMA 17-14: Nanaimo Harbour

PFMA 17-20: Nanoose Harbour

Other area closures may be identified in season to address specific management concerns such as providing access to First Nations to harvest fish or spawn for food, social, and ceremonial purposes (FSC) or vessel navigation.

Prince Rupert Closed Areas

None identified pre-season.

5.7 Gear

This section is a general description of gear used in fishing for roe herring. Please refer to the license conditions for specifics on eligible gear for each license.

5.7.1 Seine

A herring purse seine shall not be greater than 411.48 metres (225 fathoms) in length, and a minimum mesh size of 25 millimetres (one inch) extension measure.

Vessels should have a full sized herring seine, along with all the associated gear (i.e. pumps, winches, power skiffs), to fish and haul the gear, as well as adequate electronic equipment for locating and estimating herring schools.

A properly functioning chilled seawater (C.S.W.), or refrigerated seawater (R.S.W.), system is required for all vessels participating in the fishery.

5.7.2 Gill Net

No person shall use or carry on board a gill net that is more than 100 meshes in depth in a hung position or is of a greater length than 135 metres. The gill net mesh size shall not be greater than 64 mm (2.5 inches). Additional legal sized nets may be carried on accommodation vessels or mother ships.

Shaker panels shall not exceed a depth of 2 m with a mesh size no less than 150 mm (6 inches). Gill nets must be marked on both ends with buoys of similar colour, no less than 125 cm in circumference. No person shall leave any anchors, buoys or lines in the water during any closed time.

5.8 Herring Licence Pools

DFO supports the licence pooling structure established in 1998, to ensure the proper management and control of the roe herring fishery. To this end, DFO will support the integrity of the pooling system while managing to the overall fishery quota of an area.

Catch in excess of pool quotas are not permitted and therefore the DFO's on-grounds precautionary strategy is to estimate catch during the fishery opening based on hails and validated landings, and to close the fishery based on estimates of when the allocation for a gear type will be achieved.

All licence holders are advised that they must ensure catch does not exceed the amount they are licensed to harvest. Any pool that lands catch in excess of its identified allocation is subject to investigation for the violation.

5.8.1 Guidelines for Herring Licence Pools

1. Licence selection for the fishing areas will be on an open basis. This means that the average for each pool would depend on the total number of licences choosing the area. The quota for each pool equates to the licence share for the area chosen multiplied by the number of licences in a pool.
2. All roe herring licences must be associated with a pool prior to licence issuance. Licences not associated with a pool will not be issued.
3. In areas that there is an identified roe fishing opportunity, individual seine and gillnet licence quotas are determined by the number of licences that select an area. The quota for each pool is determined by the number of licences in that pool. The individual licence quotas are added together, to calculate the pool quota.
4. Each pool designates a pool captain to act a liaison between the pool and the Department.
5. Fish caught by a pool in one management area cannot be transferred to pools with an underage in another management area, or to a different gear type in the same or another area.
6. Within each area, each gear type will be managed to an overall quota. Each pool may fish until they have reached their quota, the overall fishery quota is achieved, or until the fishery is closed.
7. There will be no quota carry over from one year to the next.
8. If there are fish from seine and gillnet gear placed on the same packing vessel, fish from each gear type must be kept in separate holds on the grounds.

5.8.2 Seine licence pool fishery guidelines

1. The minimum number of seine licences in Strait of Georgia and Prince Rupert seine pools is eight.
2. Each pool will designate one representative (pool captain) to work with the on-grounds fishery manager.
3. Once DFO, in conjunction with the pool representatives, has agreed that the fish in an area are harvestable, final details of the fishing plan will be discussed with industry participants. This will include fishing boundaries, setting order, hail-in procedures, etc. Ideally target size of sets should be 200 tons maximum to facilitate capture and reduce the possibility of exceeding target catch.

4. Fish captured by seine net may be released if the roe maturity is not representative of the fish. However, once the fish have been dried up all fish must be pumped. The sorting of fish captured in the seine is not allowed. Approval from a DFO representative must be received before any fish are released.
5. The fishery manager will evaluate the catch on an ongoing basis so that new sets can be approved in order to complete the fishery.
6. It is intended that each pool catch and pack their fish. If a pool exceeds their quota, arrangements should be made to have another pool take the excess on the grounds.
7. All packers and fishing vessels leaving the grounds must hail into the fishery manager prior to leaving the fishing grounds, regardless of whether they have fish on board or not.

5.8.3 Gill net licence pool fishery guidelines

1. For all gill net area selections, a minimum pool of four gill net licences must be submitted to a PFLU. Larger pools will be allowed if desired.
2. Only a licensed punt may be used for all catching, carrying and offloading of catch on the fishing grounds.
3. Each fishing pool must designate one person to act as a representative for that pool to co-ordinate with DFO prior to and during the season. The pool coordinator will be the liaison between the pool and the fishery manager. They will be responsible for keeping a running tally of the catch, documenting fishing locations, number of nets fishing, list of packing vessels for the pool, etc.
4. Timing of gill net openings will be determined by a process for each fishing area.
5. A successful operation requires that fish harvesters are present in the area with the appropriate gear, crews, vessel support, and packing capacity when the opening occurs.
6. The Department, in consultation with the pool representatives, will set up the boundaries.
7. Each pool will be required to weigh catch, on the grounds, using current government inspected scales. Validated weights at point of landing will be used to calculate the final weight against the individual pool quota.
8. All fish caught must be retained and validated.

9. Daylight openings are preferred but if required the decision to fish at night will be made on grounds.
10. In the Strait of Georgia only, there will be a maximum number of 20 reporting relationships (gillnet pool fishery contacts), as managers will not be in a position to receive information from each of the pool coordinators.
11. In the Strait of Georgia, industry is advised that spawning periods have been compressed in recent years. It is suggested that fish harvesters consider this, as well as the size of the quota, when planning their area selections, in order to promote successful fishing ventures.
12. In the Prince Rupert District only, all vessels leaving the grounds, regardless of whether they have fish on board or not, must hail into the fishery manager prior to leaving the fishing grounds.

5.9 Fishery implementation

The following fisheries are planned based on the available quota on recommendations from and consultation with HIAB and the IHHPC:

5.9.1 Seine

Strait of Georgia

DFO will work with the roe herring sector to develop a fishing plan that minimizes the number of seine pools in the Strait of Georgia. The Department has established a maximum of eight seine pools for management purposes, and the flexibility to consolidate pools in season if required to take advantage of fishing opportunities.

Prince Rupert

The seine fishery will take place in Kitkatla (PFMA 5) in a single industry pool.

5.9.2 Gill Net

Strait of Georgia

Delivery of the management of the gill net fishery in the Strait of Georgia will be similar to recent years. Vessels leaving the grounds with gill net catch are not required to hail into the gill net manager, but are required to hail to the service provider. Vessel masters will be able to access catch information from the service provider.

Prince Rupert

The gill net fishery generally takes place in Big Bay, PFMA 3 and 4.

6 FISHERY MONITORING PROGRAM

An industry funded Fishery Monitoring Program will be used to ensure accurate and timely catch reporting.

1. To ensure full accounting of catch, a Dockside Monitoring Program funded by the licence holders will be required to validate the weight of all catch from the fishery. The monitoring program will record all landings and provide a final report documenting all catch. All costs incurred for plant validation of the catch is the responsibility of the licence holder.
2. Confirmation of the service provider shall be provided to the Department prior to area selection deadlines each year.
3. The vessel master is required to make oral reports (hails) regarding weight of catch prior to leaving the fishing grounds, as specified in the Conditions of the roe herring seine or roe herring gillnet licence.
4. To ensure the timely deployment of a port monitor to the landing stations, each vessel leaving the grounds with fish onboard must notify the designated service provider prior to leaving the fishing grounds in order to receive a validation number. There will be a unique number assigned for each hail in. This number must be written on the plant validation slip and provided upon request to a fishery officer or designate.
5. Weights validated at point of landing will be used to calculate the final validated weight against the individual pool quota. There will be no allowances made for ice and/or water in the tote at time of weighing. It is the responsibility of the licence holder to ensure that fish are being weighed accurately.
6. Approved landing stations for roe herring dockside validation are:
 - Port Edward
 - French Creek
 - Prince Rupert
 - Metro Vancouver

7 LICENSING

7.1 Fisher Identification Number

Since 2006 unique Fisher Identification Numbers (FIN) have been assigned to all Pacific commercial harvesters. The FIN allows for identification of fish harvesters for data collection, fisheries management and enforcement purposes. Once a FIN is assigned to a fish harvester, that individual will reference the FIN when identifying him or herself in subsequent business dealings with both the department and service contractors; for example filling in the FIN field on logbooks, noting the FIN when hailing, landing catch, etc. More information on FIN may be obtained from your DFO fisheries manager, or the Pacific Fishery Licensing Unit (PFLU).

7.2 Licence Categories

A roe herring seine (category HS, FHS) or gill net licence (category HG or FH) is required to commercially fish for roe herring. Roe herring licence eligibilities are limited entry and are party based.

7.3 Licence Fees

Roe herring licence fees are available at full or reduced rates. Reduced fee licence eligibilities are eligibilities held by parties who have status under the Indian Act and who elect to pay a reduced fee for roe herring licence eligibility. This election may be made at any time and is irreversible.

Gear	Full Fee	Reduced Fee
Gill Net	\$200.00	\$100.00
Seine	\$3,980.00	\$1,990.00

7.4 Licence Application

Pre-printed applications are sent to all licence eligibility holders. Completed seine and gill net applications, applicable fees must be received at a Pacific Fishery Licence Unit (PFLU) by January 12, 2012.

Gill net pool designation lists must be received at a Pacific Fishery Licence Unit (PFLU) by January 12, 2012.

Seine pool designation lists pool designation lists must be received at a Pacific Fishery Licence Unit (PFLU) or postmarked by January 27, 2012.

Applications may be delivered in person or mailed to the Vancouver, Prince Rupert or Nanaimo Pacific Fishery Licence Units (PFLU). A separate application must be submitted for each licence eligibility.

The licence eligibility holder on record must sign the application. Where the licence eligibility holder is a company or Aboriginal group, the Pacific Fishery Licence Unit must have on record a current BC Company Summary and a copy of either a Confirmation of Signing Authorities or an Amendment to Confirmation of Signing Authorities form advising who the signing authorities are.

When completing the application for 2012, licence eligibility holders must identify their area of choice as described below.

Areas	Choices	Gear
Prince Rupert	PRD	Gill Net or Seine
Strait of Georgia	Gulf	Gill Net or Seine

Applications submitted without an area choice marked will be considered incomplete. The area marked on the application will be considered a final choice unless a written request to change areas is received by January 12, 2012.

7.5 Licence Requirements

Prior to licence issuance, licence eligibility holders must:

1. Identify a party authorized to make area changes on the application;
2. Submit roe herring gill net applications in pools of a minimum of four licences (there is no maximum number) by the January 12 deadline date;
3. Submit roe herring seine applications in pools of a minimum of eight licences (there is no maximum number) by the deadline date;
4. Submit a pool designation list for each pool and provide the name of a person to act as the coordinator and contact for the pool. The name of the pool contact on the application must match the name of the pool contact on the pool designation list.
5. Designate a vessel for each roe herring seine licence. A maximum of two roe herring seine licence eligibilities may be designated to one vessel. This maximum does not apply to vessels granted special exemption in 1998. Care should be taken where 1998 exemptions specified licence numbers to be designated to specific vessels, as applications must still meet the terms of the exemption granted.
6. Indicate on the application, if the roe herring licence is to be designated as inactive for the 2012 spawn on kelp fishery.
7. If possible, staple together the pool designation list, applications for each licence eligibility in the pool, and a cheque for all fees for that pool with the licence eligibility numbers marked on the cheque.
8. Designated seine vessels must be registered as a Canadian commercial fishing vessel; and have a valid fish hold inspection certificate.

Vessel owners are reminded that under the Canada Shipping Act, all vessels fishing herring or capelin are required to have a valid stability certificate/booklet on board the vessel.

Skiffs Used in the Gill Net Fishery: Skiffs must be registered/licensed by D.O.T and display a D.O.T. number (13K, 6K, etc); and meet all fish hold inspection standards.

7.6 Licence Area Reselection

Licence eligibility holders should check the area selection totals in order to decide whether or not to request a change in area before the deadline. Area selection reports will be distributed through the Fishery Notice System on a regular basis.

Licence area reselection forms are available at a PFLU or at:

www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/index-eng.htm

If a licence area is over-subscribed with licences, a second selection opportunity may be provided during the following week. There will not be any additional selection opportunities after the second selection

7.7 Licence Issuance

Licence issue will commence after area re-selection is completed. Licences will not be issued unless designated to an appropriate pool. Incomplete applications or pool designation lists may result in delays in licence issue for all members of a pool.

Arrangements may be made to pick up a licence or to have it mailed. If you wish to pick up licences personally, please ensure that you provide a contact telephone number for us to call when the licence is ready. It is suggested that one party be responsible to pick up all licences in a pool. Instructions to Fisheries and Oceans Canada for the release of a licence are included on the licence application form.

7.8 Licence Decals

7.8.1 Seine

One rectangular decal will be issued with each herring seine licence specific to the area selected. The decal must be fastened to the starboard side of the wheel house or to the hull prior to the opening of the fishery.

7.8.2 Gill Net

A punt (rectangular) and net (round) decal will be issued with each roe herring gill net licence for the area selected. The number on the decal will match the licence tab number. The net decal must be fastened to the scotchman or buoy at one end of the net. The same end should be marked with a flag to show where the decal may be found. The punt decal must be clearly visible and at least 30 cm above the surface of the water. It must remain in place until the fishery closes and the fish are delivered.

7.9 Licence Documents

7.9.1 Valid Period

Roe herring licence documents are valid from the date of issue to December 31, 2012.

7.9.2 Replacements

Replacement for lost or destroyed licence documents may be obtained by completing a Declaration Concerning Licence Documents form. Please contact a PFLU for further details.

7.9.3 Seine Vessel Re-designation

Roe herring seine licences may be re-designated upon receipt of a written request prior to licence issuance for that pool has commenced. The application and pool sheet must be

amended. On grounds re-designation requests will not be considered where a vessel is licensed in another area and unable to arrive in time for a fishery in a second area.

1 After licence issue, vessel re-designation may occur on grounds on the approval of a fishery officer. On grounds requests are considered only if the vessel is disabled (lost, damaged or mechanical breakdown) and prior to the fishery openings in the area. Changes in area will not be permitted.

7.9.4 Licence conditions

Roe herring licences will be issued with licence conditions attached, which specify the conditions placed upon for the vessel master or licence holder. Where there are variations between this fishing plan and the licence conditions or regulations, the licence conditions and regulations shall prevail.

7.10 Transporting herring

Packing vessels are used in the herring fishery to transport herring harvested during commercial fishing to landing locations. Transporting fish is not permitted unless the vessel is registered and licensed to be used in commercial fishing or a transporting; category D licence has been issued in respect of the vessel. Any vessel based licence (i.e. salmon, schedule II species, geoduck, sablefish, halibut, crab, shrimp trawl, groundfish trawl or prawn and shrimp by trap), category licence allows the transport of roe herring caught by other vessels.

7.11 Licence Eligibility Nomination

Roe herring licence eligibilities, categories HG or HS may be nominated from one party to another. Nomination forms are available at a PFLU or through the following Internet site: www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/index-eng.htm

Nomination applications are accepted annually from April 1 to October 31. Forms must be received at a PFLU by close of business on October 31. Postmarks will not be accepted.

There are no restrictions as to who can be nominated for a full fee roe herring licence, however only First Nation individuals may be nominated for a reduced fee roe herring licence. Communal commercial roe herring licences, categories FH (gillnet) or FHS (seine) are issued to First Nation groups and the eligibility for such licences cannot be nominated.

The nomination form must be signed by the licence eligibility holder on record; if the licence eligibility holder on record is a company or Aboriginal group, the PFLU must have on record a current BC Company Summary and a copy of either the Confirmation of Signing Authorities or an Amendment to Confirmation of Signing Authorities form, advising who the signing authorities are.

Only one nominee (i.e. an individual or company) may be nominated. Multiple nominees will not be accepted. All current licence documents and validation tabs must be returned with the nomination form.

8 PUBLIC HEALTH

Commercial fleets that are staging in an area awaiting fishery openings are requested not to discharge waste water in such a manner that may it impact water quality in areas where shellstock are harvested for human consumption.

The Canadian Food Inspection Agency regulations require:

1. All herring gill net skiffs to have areas where the fish harvester can stand without standing on or in herring. Fuel and hydraulic oil pump reservoir areas must be separate from fish holding areas. Skiffs should have self-bailing systems for fish holds and standing areas separate from oil contaminated areas. No unpainted wood may come in contact with fish. Random inspections will be conducted on the fishing grounds.
2. All herring seine vessels to have valid fish hold inspection certificates. Licensing seine vessels for catching/carrying fish requires that the vessel and fish holds comply with rigid inspection criteria. Deck loads are not permitted.
3. That processing of herring in B.C. is conducted at inspected processing plants. Processing of herring for human consumption requires handling and preservation “to a degree which ensures maximum quality of the end product”, (Schedule B - Part 4 Section 12 *British Columbia Fish Inspection Regulations*).

9 COMPLIANCE WITH OTHER FEDERAL AND PROVINCIAL LEGISLATION

Fish harvesters are responsible for compliance with all federal and provincial laws and regulations pertaining to fishing operations.

10 HISTORIC FISHERY DATES AND CATCHES

Table 2: Roe Herring Catch Targets (Tons) by Area, 2001 to 2011 *

	2002	2003	2004	2005*	2006*	2007	2008	2009	2010	2011
HG (QCI)	500	closed	closed	closed	closed	Closed	closed	closed	closed	closed
PR	4,600	3,800	4,500	3,641	4,172	1,067	1700	2,000	1,537	2,346
CC	3,083	2,300	2,500	3,850	3,175	439	closed	closed	closed	closed
SOG	17,817	18,500	17,755	18,418	17,717	10,086	10,800	9,750	8,500	13,500
WCVI	500	3,200	4,700	4,588	closed	Closed	closed	closed	closed	closed
Coast wide	26,500	27,800	29,455	30,497	25,064	11,592	12,500	11,750	10,037	15,846

*2005 and 2006 targets include roe herring plus Herring Conservation Research Society (HCRS) allocation.

Table 3: Roe Catches (Tons) by Gear and Roe Herring Area - 2011

Roe Herring Area	Seine	Number of Licences ^	Gill Net	Number of Licences ^	Total Catch
HG (QCI)	0	0	0	0	0
PR	973	10	1,392	95	2,365
CC	0	0	0	0	0
Gulf	No fishery	238	4,868	1,133	4,868
WCVI	0	0	0	0	0
Total	973	248	6,260	1228	7,223

^Total number of licences does not include 4 seine licence held in ATP inventory, and 40 gill net eligibilities inactive.

Table 4: Dates, Locations and Catch of Roe Herring Fisheries - 1980 to 2011

Haida Gwaii (Queen Charlotte Islands) (Areas 1, 2E and 2W)

Year	Seine	Location	Total Seine Catch	Gill Net	Location	Total Gill Net Catch
1980	Mar 23	Skincuttle Inlet	2,321	Feb. 12-14, 17-20	Naden Harbour	1,334
	Mar 19-21	Louscoone Inlet		Mar 19-21	Louscoone Inlet	
1981	Mar 17	Skincuttle Inlet	4,281	Mar 18-20	Skincuttle Inlet	1,879
	Mar 21	Inskip Inlet		Mar 24-30	Atli Inlet	
	Mar 24	Atli Inlet				
	Mar 25	Rennel Sound				
1982	Mar 14	Lower Juan Perez	2,594	Mar 20-22	Inner Skincuttle Inlet	1,551
	Mar 20	Inskip Channel				
	Mar 22	Atli Inlet				
1983	Mar 09	Lower Juan Perez	5,071	Mar 15	Outside Poole Inlet	1,024
	Mar 21	Inskip Channel				
1984	Mar 2	Lower Juan Perez	4,427	Mar 14	Poole Inlet	589
1985	Mar 11	Skincuttle Inlet	4,832	Mar 25-26	Inner Skincuttle Inlet	1,644
1986	Mar 23	Skincuttle Inlet	2,720	Apr 7	Juan Perez Sd.	981
1987	Mar 20	Juan Perez Sound	1,896	No fishery		
1988	No fishery			No fishery		
1989	Mar 28	Louscoone Inlet	1,211	No fishery		
1990	Mar 18	Port Louis	5,787	Apr 8	Burnaby Strait	1,290
	Mar 26	Louscoone Inlet				

Year	Seine	Location	Total Seine Catch	Gill Net	Location	Total Gill Net Catch
1991	Mar 23	Rennell Sound	6,367	Apr 8	Section Cove	598
	Mar 31	Burnaby Strait				
1992	Mar 16	Louscoone Inlet	3,650	No fishery		
	Mar 18	Rennell Sound		No fishery		
1993	Mar 25	Skincuttle Inlet	3,470	No fishery		
	Mar 28	Port Louis				
	Mar 29-30	Rennell Sound				
	Mar31-Apr 1	Inskip Inlet				
1994	No fishery			No fishery		
1995	No fishery			No fishery		
1996	No fishery			No fishery		
1997	No fishery			No fishery		
1998	Mar 14 - Mar 15-16 Mar 15-17	Huston Inlet Huston Inlet Lower Juan Perez	1,512	No fishery		
	Mar 25	Skincuttle Inlet				
1999	Mar 10	Skaat Harbour	2,484	Mar 25-27	Lower Juan Perez / Skincuttle Inlet	521
2000	Mar 15	Island Bay / Skaat Harbour	1,640	No fishery		
	Mar 16	Skaat Harbour / Skincuttle Inlet				
2001	No Fishery			No Fishery		
2002	Mar 22	Juan Perez	502	No Fishery		
2003 - 2011	No Fishery			No Fishery		

Prince Rupert District (Areas 3, 4 and 5)

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
1980	Mar 29-31	Kitkatla Inlet	1,809	Mar 29-31	Kitkatla Inlet	1,153
1981	Mar 27	Kitkatla Inlet	1,159	Apr 3	Kitkatla Inlet	392
1982	No fishery			No fishery		
1983	No fishery			No fishery		
1984	Mar 21	Kitkatla Inlet	1,822	Mar 26	Big Bay	2,072
1985	Mar 28	Kitkatla Inlet	3,086	Mar 26-28	Big Bay	3,831
1986	Apr 2	Kitkatla Inlet	3,796	Apr 12-13	Big Bay	5,039
1987	Mar 31	Kitkatla Inlet	1,918	Mar 24,25,29	Big Bay	4,485
	Apr 1			Apr 2		
1988	Apr 4	Kitkatla Inlet	3,585	Apr 2,3,4,6	Big Bay	4,781
1989	Apr 2, 3	Kitkatla Inlet	3,805	Apr 2, 3, 4	Big Bay	5,231
1990	Apr 3, 4	Kitkatla Inlet	2,224	Mar 28	Big Bay	2,603
1991	Apr 6	Kitkatla Inlet		Mar 25, 27	Big Bay	
1992	Mar 30	Kitkatla Inlet	1,230	Mar 26	Big Bay	3,912
1993	Apr 1	Kitkatla Inlet	2,000	Mar 31	Big Bay	4,155
1994	Apr 2, 3	Kitkatla Inlet	2,017	Apr 2, 3	Big Bay	2,530
1995	Apr 4, 5	Kitkatla Inlet	797	Mar 27	Big Bay	1,522
1996	No fishery			Mar 27	Big Bay	3,075
1997	No fishery			Apr 5	Big Bay	6,007
1998	No fishery			Mar 21-23	Big Bay	3,501
1999	No Fishery			Mar 20-25	Big Bay	2,028
2000	Mar 27-28	Kitkatla Inlet	1,366	Mar 29-Apr 1	Big Bay	3,308
2001	Mar 23	Kitkatla Inlet	839	Apr 1 – 4	Big Bay – Venn Pass	2,100
2002	Apr 3-6	Kitkatla Inlet	2,059	Mar 25-29	Big Bay	2,681
2003	Mar 23	Kitkatla Inlet	1,383	Mar 28-30	Big Bay	2,706
2004	Mar 27; 29	Kitkatla Inlet	1,646 *	Mar 19 – 25	Big Bay	2,330
2005	Mar 18 – 20	Kitkatla Inlet	1,567 *	Mar 19 – 21	Big Bay	2,142 *
2006	Mar 23, 24	Kitkatla Inlet	820*	Mar 26-29	Big Bay	1,697*
2007	No Fishery			Apr 3 to 4	Big Bay	1,067
2008	Mar 15-18	Kitkatla Inlet	566	Apr 2 to 4	Slippery Rock	1,266
2009	Apr 7,8	Kitkatla Inlet	786	Apr 7,8	Big Bay	1,418
2010	Mar 25-26	Kitkatla Inlet	523	Mar 29- Mar 31	Big Bay	1,113
2011	Mar 25-27	Kitkatla Inlet	973	Mar 26-29	Big Bay	1,346

Central Coast (Areas 6, 7, 8)

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
1982	Mar 15	Stryker Bay	2,489	Mar 18-19	Cape Mark-Thompson Bay	4,488
				Mar 21-22	Kitasu Bay-Higgins Pass	
1983	Mar 15	East Houghton Islands	2,272	Mar 21	West Coast Price Island	3,945
				Mar 23	Houghton Islands, Thompson Stryker, Cecilia Island	
1984	Mar 16-17	East Higgins Pass	3,955	Mar 27-29	Kitasu Bay, Powell Anchorage	3,949
					S.E. Princess Alice Island	
1985	Mar 11	Spiller Channel	2,993	Mar 31-Apr 1	Weeteam Bay, Kitasu Bay, Powell Anchorage, Spiller Dundivan, Thompson Wasquesiu Houghton Islands, Kwakshua Channel	2,529
1986	Mar 29	E. Higgins Pass	2,224	Apr 5	Kitasu Bay, Powell Anchorage, Spiller Channel, Thompson	1,296
1987	Mar 29	Seaforth Channel	2,583	Mar 30	Powell Anchorage, Stryker	1,014
		Spiller Channel			Kitasu Bay	
1988	Mar 19	Stryker Bay	3,490	Mar 28-30	Kitasu Bay, Thompson Bay	1,069
1989	Mar 24	Thompson Bay	6,796	Mar 30, 31	Raymond Pass	3,209
	Mar 25	Kitasu Bay			E. Higgins Pass	
		E. Higgins		Apr 1, 3, 4	Kitasu, Thompson & Stryker	
					Boddy/Joassa Channel	
					Norman Morrison Bay	
1990	Mar 19	Spiller Channel	5,336	Mar 28	Kitasu Bay &	3,357

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
	Mar 24	Spiller Channel		Mar 29	Stryker Bay Kitasu Bay, Stryker Bay, Thompson Bay	
1991	Mar 23	Spiller Channel	7,300	Mar 31	Thompson Bay, Powell Anchorage	1,915
1992	Mar 19	Seaforth / Spiller	6,913	Mar 24	Seaforth/ Powell Anchorage/ Thompson Bay	1,085
1993	Mar 24	Seaforth / Spiller	8,655	Mar 28-29	Seaforth, Thompson Bay, Boddy Pass	2,007
1994	Mar 26, 27	Seaforth / Spiller	10,036	Mar 28	Kitasu, Thompson Bay, Powell Anchorage	2,406
1995	Mar 18	Kitasu Bay	8,406	Mar 22	Kitasu Bay Moss Pass	1,581
	Mar 22, 23	Spiller Channel		Mar 29	Cecilia Island, Spiller Ch, Thompson Seaforth Channel	
1996	Mar 20	Seaforth / Spiller	3,900	Mar 23	Powell Anchorage, Berry Inlet, Seaforth Channel	369
1997	Mar 25	Spiller Channel	2,805	Mar 29	Powell Anchorage	33
1998	Mar 16-18	Spiller Channel	7,919	Mar 20-23	Seaforth Channel, Mathieson Channel	498
1999	Mar 16-17	Spiller Channel	5,967	Mar 19-24	West Price Is.	1,558
2000	Mar 17-19	Spiller Channel	6,513	Mar 28-30	East Higgins Pass	1,021
2001	Mar 18-21	Spiller Channel	5,665	Mar 26	East Higgins Pass	509
2002	Mar 27-29	Spiller Channel East Higgins Pass	2,636	Apr 2-5	East Higgins Pass Powell Anchorage	440
2003	Mar 23-24	East Higgins Pass	2,054	Apr 2-3	Powell Anchorage	319
2004	Mar 24-25	Seaforth / Spiller	2,559 *	No Fishery		
2005	Mar 22- 24	Seaforth / Spiller	3,618 *	No Fishery		

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
2006	Mar 21 -25	Lambard Inlet, Neekas Inlet	2,710*	No Fishery		
	Mar 26-28	E. Higgins Pass				
	Mar 27-28	Seaforth/Spiller				
2007	Mar 15 –Apr 3	Clifford Bay, Waskesui Pass/East Higgins Pass/Kitasu Bay	439	No Fishery		
2008- 2011	No Fishery			No Fishery		

Strait of Georgia (SOG) (Areas 12 to 18)

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
1980	Mar 6	Lambert Channel		Mar 5-6	Hornby - Denman	3,502
1981	Mar 6 Mar 7-8	Hornby - Denman	2,294	Mar 9-12 Mar 5-7	Northwest Bay Hornby - Denman	5,584
1982	Mar 7-8	Pylades Channel	3,651	Mar 5-7	Hornby - Denman	6,154
1983	February 27	Cape Lazo	8,576	Feb. 27-Mar 1	Hornby - Denman	9,495
1984	Mar 4-5 Mar 2 Mar 2, 4	Powell River Nanoose Bay Powell River	4,548	Mar 9-11	Cape Lazo, Nanoose Bay	6,657
1985	Mar 6	Hornby - Denman .	2,915	Mar 8-9	Hornby - Denman	3,852
1986	No Fishery			No Fishery		
1987	Mar 6, 7	Powell River	3,429	Mar 7, 8	Lambert Channel	6,612
1988	Mar 3	Baynes Sound	1,621	Mar 17, 18 Mar 12	Yellow Point Hornby - Denman	6,601
1989	Mar 11, 12	Pylades & Stuart Channel	1,562	Mar 15	Cape Lazo - French Creek	6,525
1990	No Fishery			Mar 14 Mar 22-24	Cape Lazo Hornby - Denman Hornby - Denman French Creek Stuart Channel	8,693
1991	Mar 2	Baynes Sound	1,020	Mar 17 Mar 18-19	Hornby - Denman Hornby - Denman	9,844
1992	Mar 4	Baynes Sound	3,430	Mar 14-15	Cape Lazo - Lambert Channel	9,393
1993	Mar 2	Baynes Sound	4,383	Mar 6	Upper Denman - Hornby Baynes Sound - Lambert Channel	9,948
1994	Mar 10	Baynes Sound	4,902	Mar 14, 15	Shelter Point to Dorcus Point	12,249
1995	Mar 4, 5	Baynes Sound	4,209	Mar 12	Upper Baynes Sd-Hornby Is. Lambert Channel	9,112
1996	Mar 7, 8	Baynes Sound	6,995	Mar 15	Baynes Sd-Hornby Is.	6,528

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
1997	Mar 4	Baynes Sound	9,410	Mar 19	Lambert Channel Qualicum Baynes Sd- Hornby Is.	6,294
1998	Mar 8,9	Baynes Sound	6,259	Mar 12, 13	Lambert Channel Baynes Sound - French Creek	7,343
1999	Mar 5	Baynes Sound	5,104	Mar 18 Mar 4-7	Nanaimo Baynes Sound- Lambert Channel	7,296
2000	Mar 2-4	Lower Baynes Sound	6,689	Mar 4-7	French Creek Lower Baynes, East Coast Denman Island, Qualicum	8,155
2001	Mar 4	Baynes Sound	7,358	Mar 6-9	Cape Lazo to Thames Creek	8,281
2002	Mar 7-8	Baynes Sound	9,685	Mar 17-20	Cape Lazo to Nanaimo	8,640
2003	Mar 14	Baynes Sound	10,897	Mar 16-23	Cape Lazo to Nanaimo	8,707
2004	Mar 10-13	Nanoose Bay & Northumberland	7,737	Mar 10-15 Mar 20-29	Cape Lazo - Valdes Island	5,637
2005	Feb 28 – Mar 2	Baynes Sound	7,710 *	Feb 28 – Mar 4	Cape Lazo to Nanaimo	9,657 *
2006	Mar 6-10	Baynes Sound	9,060*	Mar 4 Mar 13-15	Cape Lazo to Nanaimo Stuart Channel, Valdes Island	7,698*
2007	Mar 12-14	French Creek/Chrome Island/Baynes Sound	4,260	Mar 4-14	Hornby Island/Denman Island to Parksville	5,826
2008	Mar 1,2, 4, 5	French Creek/Qualicum Beach	6,664	February 26 – Mar 24	Cape Lazo – Nanaimo, Dodd Narrows	3,033
2009	Mar 4	Baynes Sound	6,265	Mar 6-8	Cape Lazo to Nanaimo	4,340
2010	Feb 28	Neck Point/Blunden	5,004	Feb 26-Mar 3	Cape Lazo to Nanaimo	3,576
2011	No fishery			Mar 13 – 22	Cape Lazo to Nanaimo	4,686

WCVI (Areas 23 to 27)

Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
1980	March 7-8	Clayoquot Sound	1,854	March 8	Clayoquot Sound	2,536
				March 2-5	Esperanza Nuchatlitz Pt. Langford	
				March 3-9	Winter Harbour	
1981	March 11	Barkley Sound	5,521	March 15-16	Barkley Sound	3,395
				March 2-5	Esperanza / Nuchatlitz, P. Langford	
				March 6-13	Winter Harbour	
1982	March 17, 18	Barkley Sound	2,613	March 8-9	Clayoquot Sound	3,433
	March 8	Clayoquot Sound		March 7-12	Esperanza / Nuchatlitz, Pt. Langford	
	March 7, 8	Winter Harbour		March 8-14	Winter Harbour	
1983	March 1	Barkley Sound	6,769	March 3	Esperanza, Nuchatlitz	2,684
				Feb. 28-March 4	Winter Harbour	
1984	March 8	Barkley Sound	6,303	March 5	Esperanza / Nuchatlitz	946
				March 3-6	Winter Harbour	
1985	No Fishery			No Fishery		
1986	No Fishery			No Fishery		
1987	Area 23 March 12	Barkley Sound	14,438	Area 25 March 12	Esperanza / Port Langford Nuchatlitz	2,724
1988	Area 23 March 11 Area 24	Barkley Sound Clayoquot Sound	8,375	Area 24	Clayoquot Sound	1,596
	March 11	Cypress Bay		March 23		
1989	March 13, 17	Barkley Sound	9,825	March 23	Hand / Pinkerton / Turtle Island	3,874
1990	March 11, 12	Barkley Sound	7,819	March 21	Yellow / Elbow Banks	2,160
1991	March 10	Cook Channel	6,145	March 21	Macoah / Toquart	2,062
	March 12	Barkley Sound				
1992	March 6-8	Stopper Island / Toquart Bay	3,123	March 8	Maggie River/ Macoah	618

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Year	Seine	Location	Total Seine Catch (tons)	Gill Net	Location	Total Gill Net Catch (tons)
1993	March 11	Barkley Sound	5,775	March 10	Pass Winter Harbour	369
1994	March 7	Barkley Sound	6,022	March 9	Winter Harbour Esperanza Inlet	1,020
1995	March 3	Barkley Sound	1,629	No Fishery		
1996	March 14-16	Barkley Sound	793	No Fishery		
1997	March 16	Tofino		No Fishery		
1998	March 4 March 9	Barkley Sound Barkley Sound	6,893 5,377	March 17	Barkley Sound	1,640
				March 7,8 March 18	Esperanza Inlet Sydney Inlet	
1999	March 10	Barkley Sound	3,210	March 4-7 April 1	Esperanza Inlet Sydney Inlet	1,062
2000	March 8-9	Barkley Sound	547	March 21-24	Esperanza Inlet	772
2001	No Fishery			No Fishery		
2002	No Fishery			March 26-28	Esperanza Inlet	428
2003	March 10-14	Barkley Sound	2,285	March 24-27	Esperanza Inlet	1,042
2004	March 14-15	Rosa Harbour	3,689 *	March 14-19	Inner and Outer Nuchatlitz; Rosa Harbour	654
2005	March 7 - 8	Esperanza Inlet	3,257 *	March 7 - 12	Esperanza Inlet	988
2006-2011	No fishery			No fishery		

*Includes portion of HCRS allocation.

APPENDIX 8. COMMERCIAL FISHING PLAN FOR SPAWN ON KELP

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1 PURPOSE

This document is a Commercial Fishing Plan for spawn on kelp in British Columbia, for the period from February 1, 2012 to June 30, 2012.

2 COMMERCIAL FISHERY OVERVIEW

The spawn on kelp fishery traditionally occurs in four of the five Pacific herring major stock assessment areas: Haida Gwaii (HG), Prince Rupert District (PRD), Central Coast (CC), and the west coast of Vancouver Island (WCVI). It does not occur in the Strait of Georgia (SOG) because of the lack of suitable kelp. The fishery also has activity in the minor stock assessment areas (Area 2W and 27), and in Areas 10 and 12.

Spawn on kelp is a traditional food of B.C. coastal First Nations. First Nations communities harvest herring spawn-on-kelp for food, social and ceremonial purposes (FSC) under the authority of communal licences. First Nations coastal communities traditionally harvest herring spawn naturally on several different types of kelp, eel grass and tree branches.

The spawn on kelp fishery provides the opportunity to harvest herring eggs which have adhered to blades of kelp after herring have spawned. Commercial production of spawn on kelp was initiated in 1975 with the issuance of permits to 13 individuals, and developed in a gradual fashion. Selection of permit holders was based on remoteness of operation site and experience in catching, holding and handling live herring. Permits were issued only if adequate supplies of herring and kelp were available in the area being considered.

Between 1975 and 1983, additional permits were granted, increasing the number of permit holders to 29. In 1983, the permits formally became limited entry category J licences. In 1989, ten new licences were granted to First Nations subject to retirement or rendering temporarily inactive a set number of roe herring seine or gillnet licences from the herring roe fishery. Lastly, in 1998, seven new communal commercial licence eligibilities were negotiated with the Heiltsuk First Nation following the Gladstone decision.

Today, there are 46 spawn on kelp licence eligibilities. Ten of these are communal commercial, category “FJ” licence eligibilities held by First Nations (three as a result of relinquishment through ATP and re-issuance as communal commercial, and seven are unique Heiltsuk communal commercial licences), while the remainder are category ‘J’ commercial licence eligibilities issued to individual parties, which include First Nations individuals and bands.

3 MANAGEMENT MEASURES FOR THE DURATION OF THIS PLAN

3.1 Changes from Previous Season

- **Three new license conditions are to be implemented:**
 - Only 2 closed ponds with captured herring will be allowed at one time.
 - The maximum distance between 2 closed ponds with captured herring is 5 nautical miles (9.3kms) by water.
 - Herring cannot be held more than 6 days from the time the first captured herring is added to the closed pond.
- Although 6 operations may be permitted to operate in Area 2W based on the expected use, local management concerns exist with logistics. Therefore, a more restrictive management approach will be used if the number of operations exceed three. The department will work with licence operators.
- The West Coast Vancouver Island (areas 23, 24, 25) stock abundance levels are slightly above the CSAP Cutoff level, there is sufficient stock to support a limited harvest opportunity.

3.2 Events Calendar

Table 4: Events Calendar for 2012 season.

MONTH	DAY	EVENT
2011		
September	7-9	CSAP Meeting to review Stock Assessment for 2012
	22/23	IHHPC pre-season planning meeting
October	1	Provincial Marine Plant Harvest Permit Application Deadline
	4	Release of Draft 2011/11 IFMP to Public
November	4	Deadline for public input to Draft 2011/11 IFMP
	25	Deadline for spawn on kelp licence eligibility holder consensus proposal for Area 2W.
December	2	Deadline for Area 2W and WCVI spawn on kelp lottery submissions to PFLU if no consensus proposal.
	31	Deadline for submission of licence application and fees to a Pacific Fishery Licence Unit (PFLU), whether harvesting will take place or not
2012		
January	13	Deadline to designate 2012 roe herring licences as inactive for 2012

February	1	Deadline to enroll with spawn on kelp monitoring program
	1	Spawn on kelp fishing season opens
April	15	Closure of Island Point to seining operations for spawn on kelp purposes
May	31	Spawn on kelp fishing closes
June	30	All Spawn on kelp fishing gear removed from water

3.3 Open Times

The spawn on kelp commercial fishing plan is in effect from 00:00h February 1, 2012 to 23:59h June 30, 2012.

3.4 Open Areas

The following areas are identified as fishing areas, subject to in season decisions on specific areas that will be opened by Variation Order and to the permanent area closures detailed in the following section (Table 5).

Table 5: Open areas for the 2012 season.

Major Stock Assessment Areas	Prince Rupert District West Coast Vancouver Isl.	3, 4*, 5 23 through 25
Minor Stock Assessment Areas	Area 27 Area 2W	27-1 through 27-10 2-49 through 2-100
Other Stock Areas	Area 12	

*Island Point is located on the North side of Porcher Island in the Prince Rupert Stock Assessment Area. This is an alternate site for spawn on kelp operations in Area 4 which usually accounts for only a small portion of the Area 4 harvest. If more than three operators are interested in harvesting herring in the area, a precautionary plan will be drafted to minimize herring usage when harvesting at Island Point.

Island Point closes to seining for herring on April 15th. Operators wishing to fish beyond the April 15th closure may contact their local Resource Manager (see Contacts). Please see your spawn on kelp licence conditions for details.

3.5 Precautionary Closures

The stock abundance forecast for the following areas are below the respective Cut-off levels. DFO is recommending a precautionary regime for the 2012 season and no commercial harvesting will be permitted in these areas (Table 6):

Table 6: Pre-cautionary closures for the 2012 season.

Major Stock Assessment Areas	Haida Gwaii (Area 2E)	2-3 through 2-19, 2-21 through 2-37
	Central Coast	6, 7, and 8
Other Stock Areas	Area 10	

Note that there may be additional closures in season by Variation Order and Fishery Notice. Consult with the local DFO office before fishing in an area.

3.6 Participation Requirements

The spawn on kelp fishery is a limited entry fishery, open to those licence eligibility holders who meet the specific licence requirements described in Section 6.5.

A valid spawn on kelp licence is required prior to any spawn on kelp activity, including the setting of any spawn on kelp enclosures (i.e. floating frame with web).

3.7 Allocation and Harvest Levels

A guideline for determining spawn on kelp harvest allocations has been implemented by the Department to avoid the issuance of partial quotas based on the CSAP recommended maximum yield. Where the CSAP recommended maximum yield is not evenly divisible by 100 short tons for a closed pond operation or 35 tons for an open pond operation, the maximum yield will be rounded up or down to the nearest evenly divisible yield.

3.7.1 Prince Rupert

The Prince Rupert District has an expected use of 1,000 short tons to accommodate all 10 licences at full quota for the 2012 spawn on kelp season.

3.7.2 Area 2W

Area 2W (west coast of Haida Gwaii) has a maximum use of 600 short tons for the 2012 spawn on kelp season. The CSAP recommended yield is 595 tons, based on the round up, round-down guideline the yield will be rounded up to 600 tons to accommodate up to six licenses with full quotas. However, based on local manager advice, 6 full licenses would be a management concern due to the limited area in Port Louis. Based on 2010 where no licenses opted to operate in 2W, it is not expected that that 6 applications will be received for the lottery by December 2, 2011.

3.7.3 Area 12

Area 12 has an expected use of 100 short tons for one closed pond operation.

3.7.4 Area 27

Area 27 (North West coast of Vancouver Island) has an expected use of 105 short tons for the 2012 spawn on kelp season which is under the CSAP recommended maximum yield for all 3 open pond operations at full quotas.

3.7.5 *West Coast Vancouver Island*

The WCVI has a maximum use of 300 short tons for the 2012 spawn on kelp season. The CSAP recommended yield is 321 tons. Based on the round up, round-down guideline, the yield will be rounded down to 300 tons to accommodate up to three closed-pond licenses with full quotas. The department will work with the licence holders to develop a harvest plan and a consensus proposal for three licences.

If more than three licences opt to operate in WCVI and there is no consensus proposal, a lottery process will be used with a deadline of December 2, 2011 for lottery applications to be received by PFLU.

3.8 **Quota Allocations**

The majority of J and FJ licences have an individual quota of 16,000 pounds of drained product, adjusted annually based on the previous year for overages and underages. The Heiltsuk First Nation holds nine licences with a total quota of 240,000 pounds.

3.9 **Catch in Excess of Quota (Overage)**

Operators must operate in a manner that ensures that over-harvest does not occur. Any licence holder landing spawn on kelp product in excess of the licensed amount may be subject to prosecution and seizure of the overage as a violation of their conditions of licence.

No person who is fishing under the authority of a licence issued for the purpose of commercial fishing shall dump from a vessel any fish that has been caught in accordance with the *Fisheries Act* and the *Regulations* made thereunder.

3.9.1 *Carry Over of Quota Overage and Underage*

The carry-over program for quota overages or quota underages will continue in 2012. First introduced in 1996, this program allows the spawn on kelp licence holder to carry over reasonable quota overages or quota underages from one year to the next.

The Rules for Carry-Over of Individual Quota Underages

Licence holders whose product weight is under their quota by 2000 pounds or less, at the end of the season, will have the equivalent weight of the underage added to their individual quota in the next year the license is active.

Licence holders whose product weight is under the quota by more than 2000 pounds, at the end of the season, will have only 2000 pounds added to their individual quota in the following season and will forego the remainder.

The Rules for Carry-Over of Individual Quota Overages

Licence holders, whose product weight is over their quota by as much as 1000 pounds at the end of the season, may retain the overage. Any product landed in excess of 1000 lbs

will be seized and charges may result. The equivalent weight of any overage will be subtracted from the quota for that licence in the next year it is active.

3.10 Compliance with other Federal and Provincial Legislation and Regulations

3.10.1 Province of BC Kelp Harvest Requirements

The BC Ministry of Agriculture and Lands licence and enforce the harvesting of Marine Plants. The harvest of *Macrocystis integrifolia* kelp used in spawn on kelp operations is carried out under the authority of a Marine Plant Harvest Licence issued by the BC Ministry of Agriculture and Lands. Conditions of licence include area of harvest, quantity of kelp that may be harvested, harvesting equipment, harvesting techniques, and harvest log and royalty submission.

The Ministry of Agriculture and Lands is obliged to consult with First Nations prior to the issuance of the Marine Plant Harvesting Licence. Licencees can assist the Ministry in this process in a number of ways, including:

- participating directly with the First Nations in the consultation process;
- providing direct support to the First Nations in the consultation process; and
- building new or maintaining any existing relationships with First Nations;
- providing the BC Ministry of Agriculture and Lands with any further information that you think could assist in our consultation process.

The following application requirements apply:

- Application deadline is October 1 for harvest proposed for the following year;
- Each application must include the relevant J licence holder information;
- The applicable licence fee payable to the provincial Minister of Finance is \$110;
- As per the *BC Fisheries Act*, the person harvesting the kelp must have a valid licence. It is the responsibility of the J licence holder to ensure the product received was legally harvested.

For information regarding kelp harvesting, licensing and First Nation consultation contact:

BC Ministry of Agriculture and Lands
2500 Cliffe Avenue
Courtenay, BC V9N 5M6
Phone: (250) 897-7540

Fish Inspectors may conduct checks for proof of a valid Marine Plant Harvest Licence and may conduct audits at processing facilities to ensure compliance with the *BC Fisheries Act*

http://www.al.gov.bc.ca/fisheries/commercial/commercial_mp.htm

3.10.2 Public Health

To ensure product quality, all herring spawn on kelp harvesters and companies processing spawn on kelp must adhere to the following requirements:

- All herring spawn on kelp must be shipped to, graded, packed, labeled and exported from establishments possessing valid Federal Certificates of Registration as fish processing plants. The plant's Quality Management Program must include controls for the processing of herring spawn on kelp.
- Containers must be used to collect and hold spawn on kelp during harvesting and for transporting to the processing plants. These must be constructed of approved materials, as per the Canadian Food Inspection Agency Reference Listing of Accepted Construction Materials, Packaging Materials and Non-Food Chemical Products. They must also be fitted with rigid covers when holding product to protect it from weather and contamination.
- During the holding and transporting period, the product should be kept chilled to prevent quality loss.

For export of the product from registered processing plants, rectangular plastic pails with tight fitting lids are the most acceptable. These particular pails cause minimal damage to the product.

Export containers (pails), must be properly labeled to show the name of the product, the weight, a list of ingredients and the name and address of the processor or distributor. If a distributor's name and address is used, the processor's registration number must be on the label as well. The containers must also indicate the date on which the product was packed so that if there are any problems the product can be segregated into lots without having to hold or delay the entire shipment. Grades are not allowed unless provided for in regulations. The licence number and a decal numbered sequentially, as issued by Fisheries and Oceans Canada must also appear on each container.

Product certification for export will be carried out upon request. The product must be available for inspection at a federally registered fish processing plant at time of request. Requests for certification must be made four working days prior to last date available for inspection.

When the lot is ready for inspection, application in writing must be made to any of the following:

Canadian Food Inspection Agency
4250 Commerce Circle
Victoria, B.C. V8Z 4M2
Phone: (250) 363-3455
Fax: (250) 363-0336

Prince Rupert Inspector: (250) 627-3439
2250 Boundary Road
Burnaby, B.C. V5M 4L9

Fisheries and Oceans Canada
Appendix 8 – Commercial Plan for Spawn on Kelp
2011/12 Pacific Herring Integrated Fisheries Management Plan

Phone: (604) 666-4427

Fax: (604) 666-3650

To issue the export certificate, the following information will need to be included, and so applicants should include this in their application:

- Product description.
- Lot number or day code.
- Number of buckets.
- Weight per bucket and total weight.
- Sequential numbers (from stickers issued by Fisheries and Oceans Canada).
- Permit number (if more than one permit number, the amount for each).
- Consignee.
- Consignor.
- Identifying marks (unique to shipment).
- Date of shipment or last date available for inspection.
- Method of shipment. (Specific vessel or flight must be stated).
- Location of product.
- Processor and registration number.
- Country for export.

4 GEAR

This section is a general description of gear used in both closed and open pond operations. Please refer to the license conditions for specifics on eligible gear for each license.

4.1 Seine

- A herring purse seine shall not be greater than 410 m (225 fathoms) in length, and mesh size not less than 25 mm (1 inch) extension measure.
- The bunt of the seine net must be knotless web and a minimum of 40 metres (20 fathoms) in length.

4.2 Trap Net

- A trap net may be used as an enclosure to hold herring.

4.3 Closed Ponds (Herring Enclosures)

- Note that a valid J or FJ licence is required before putting any webbing in the water for use as a herring enclosure. All captured or impounded herring must be released following harvest of the spawn on kelp product, except where specific arrangements have been made with the Department.

4.3.1 *Enclosure Construction*

- Enclosures must be constructed so that the floating frame can support the weight of an impoundment net and enclosed herring without collapsing.
- The bottom of the herring enclosure net must be maintained so that the bottom of the net is a minimum of 3 m (9 feet) above the substrate under the enclosure at all times.

4.3.2 *Enclosure Marking*

- Every individual herring enclosure (i.e. floating frame with impoundment net) must be marked with the Category J licence number under the authority of which it is operated, in accordance with the licence conditions. Enclosures must also be numbered in a sequential fashion (i.e. Pond 1, Pond 2, etc.) This numbering requirement also applies to single enclosures (i.e. Pond 1).

4.3.3 *Webbing*

- Any net used in a herring enclosure must be made of knotless web with a mesh size not greater than 25 mm (1 inch).
- Any net used to impound herring for spawn on kelp production must remain suspended in the water column for a minimum of 21 days or until all of the eggs have hatched following the release of the impounded herring.

4.3.4 *Predator Deterrence*

- Herring enclosures may deploy a predator deterrence system that meets the following conditions:
 - A bird net consisting of contiguous webbing. The bird net must be pulled tight across the frame of the impoundment.
 - A predator net consisting of contiguous netting with a maximum mesh size of 35 mm (1 5/16 inches). The predator net must surround the webbing of the impoundment completely, maintain a space of at least 30 cm (12 inches) between the predator net and the webbing, and not exceed the requirements of 4.3.1

4.4 Open Ponds (No Herring Enclosures or Seines)

- Note that a valid J or FJ licence is required before putting any webbing or other device in the water for use to direct herring towards suspended kelp. Herring may not be enclosed or otherwise impounded in any manner.
- Nets may be suspended in the water to direct herring towards the suspended kelp, but may not impound or trap herring. Suspended nets must meet the following specifications:
- Any net used must be of a knotless web with a mesh size not greater than 25 mm (1 inch).
- Floating frames, used to suspend the nets, must be capable of supporting the weight of the net without collapsing.

- The bottom of any nets must be a minimum of 3 m (9 feet) above the substrate at all times.
- The net must remain in the water a minimum of 21 days following the most recent herring spawn deposition
- Each net must be marked with the Category J licence number under the authority of which it is operated, in accordance with the licence conditions.

5 MONITORING PROGRAM

Timely and accurate information on harvest and harvesting practices is essential to assess the status of fish stocks and to ensure the conservation and the long term sustainability of fish resources. Effective monitoring and accurate catch reporting in the spawn on kelp herring fishery is integral to the effective management of the fishery and herring resource.

The Spawn on kelp Fishery Monitoring Program is industry funded and has been in place since 1996. This program provides dockside validation of landed and processed spawn on kelp by port monitors. In season, all monitoring activities are directed by an independent program coordinator or by a DFO representative.

When the Central Coast is open for harvest of spawn on kelp, the Heiltsuk First Nation participates in an alternative monitoring program that provides coverage on-grounds, at the landing station and the processing plant.

Additional information on the monitoring program will be provided at the time of licence issuance. Please note that compliance with the monitoring program is a condition of licence. Proof of monitoring via a letter from the service provider will be required prior to licence issuance.

5.1 Service Provider

J.O. Thomas and Associates Ltd. is the industry selected service provider for the spawn on kelp fishery. Contact information may be found in the Contacts section.

5.2 Letter of Agreement

Prior to licence issuance, proof of monitoring will be required via a letter of agreement from the service provider verifying their agreement with the delivery of a fishery monitoring program. Upon receipt of payment for services, the service provider will provide the PFLU with the required letter of agreement.

The intention to participate in the spawn on kelp fishery must be made to the service provider before February 1, 2012, in order for monitoring fees to be calculated. Failure to meet this deadline may result in increased monitoring fees or an inability for the service provider to arrange an approved monitoring program.

5.3 Hail Reports

In 2006, a program of hailing information from the grounds was initiated. This program involves regular and frequent communications with the service provider at each stage of the spawn on kelp operations.

All operators will require a method of reliable communication to ensure their hail requirements are met. Operators may use whatever communication device that they have available (e.g. landline, cell-phone, sat. phone or email). Though it is acceptable for operators in the same area to use a common communication device (such as a sat phone or email etc.) or a 3rd party that relays hails to the service provider, each operator ultimately is required to ensure their hails are current and meet their license conditions.

Each stage of the spawn on kelp operation will need to be hailed to the service provider during weekday office hours (08:00 to 16:00). Confirmation numbers will be provided with each hail (coded for activity type), as proof of hail and for review at point of landing. If an operator is open ponding some of the hail-in points may not apply. Operators are requested to refer to their Conditions of Licence for their specific hailing requirements. Failure to hail may result in enforcement action.

5.4 Reporting and Notification Requirements

5.4.1 General

When harvesting under a category J or FJ licence, the vessel master shall report all required information to the designated service provider as detailed in the spawn on kelp operator's logbook and conditions of licence.

5.4.2 Importing Product from Alaska

In the past, spawn on kelp product from outside Canada, mainly Alaska, was imported without notification or validation requirements for transport vessels. As of 2006, the conditions for importing spawn on kelp include notification to the Spawn on kelp Coordinator in the North Coast office, and validation of the offload weight by a qualified third party service provider. An information package has been developed for importers and can be obtained from the spawn on kelp Coordinator.

5.4.3 Marine Mammal and Seabird Incidence Reports

All ponding operations are to complete an incident report for each encounter with a seabird or marine mammal that results in mammal mortality. Incident reports are to be faxed to the DFO Reporting Hotline as soon as a mortality is discovered (see Contacts). An incident report form will be provided at the time of licence issuance.

5.4.4 Logbooks

Logbooks are available from the service provider. The vessel master is responsible for the provision and maintenance of an accurate record of daily harvest operations. Catch information must be recorded in the harvest log by midnight of the day in which the activity occurred. The logbook must be kept aboard the licensed vessel, and must be

produced for examination on demand of a fishery officer, fishery guardian, or port monitor.

These books must be submitted to the service provider within one week of final validation for the season. The logbooks will have double copies, so that a copy of the pages can be distributed to the licence holder, the service provider and the Department.

5.5 Catch Validation and Fishery Validation Form

To ensure the continuity of catch information from the time of spawn on kelp harvest to delivery and processing, a Herring Spawn on Kelp Fishery Validation Form must be completed for each harvest operation. The operator will be responsible for documenting spawn on kelp harvest on the Validation Form and in the Logbook.

The original copy of the Herring Spawn on Kelp Fishery Validation Form must accompany the spawn on kelp product to the landing port and to the processing plant, where the port monitor will record the landed weight and processed weight on the Validation form.

A port monitor will monitor all spawn on kelp harvested and landed. The total drained weight of spawn on kelp product validated at the landing port will be applied against an individual quota. A salt allowance, equal to five percent of the total drained weight, shall be subtracted to compensate for salt and entrained water (i.e., the total validated weight will equal the drained weight minus five percent of the drained weight).

5.6 Transfer of Product

Transfer of product between licence holders is permitted to allow the flexibility of licence holders to harvest their quota and to facilitate other licences to achieve their licensed quota with minimal herring usage. This ability does not authorize a licence holder to exceed their licensed quota.

On-grounds and in-plant transfers may occur between operating spawn on kelp licence holders licensed for the same management and stock assessment area. Operators licensed for the same fishery management area may consolidate fishing operations; however, they must identify their pooling relationship to the service provider prior to initiating fishing activities.

In-plant transfers of product between licence holders from different management areas, but the same stock assessment area are subject to the prior approval of a Fisheries and Oceans Canada representative. In such cases, a completed Herring Spawn on Kelp Product Transfer Document will be required.

In-plant transfers will only be allowed to a licence that has made a significant fishing effort to achieve their quota but has been unsuccessful. Priority of spawn on kelp product transfers will be to the operators licensed within the same Fishery Management Area(s) and secondly to other operators located within the same stock assessment area.

5.7 Containers Used For Export of Product

To facilitate control of spawn on kelp product processed for transport to the Japanese market, a plastic container has been developed for use in the industry. The dimensions of the container are approximately 50cm x 35cm x 20cm, and product capacity is approximately 14 kg (30 pounds). A limited number of containers (600) are available for issuance to each licence holder. The service provider will maintain an inventory of containers from year to year and control the release and recovery of buckets.

In season, the port monitors will monitor containers used in processing plants and ensure their appropriate disposition utilizing the Herring Spawn on Kelp Pail Transfer Document. Fisheries and Oceans Canada will audit the quantities utilized by each licence holder.

5.8 Sales Report

It is the responsibility of the licence holder to complete an accurate sales report after the spawn on kelp product has been sold. Licence holders are required to submit the form to Fisheries and Oceans Canada Regional Data Unit no later than September 15, 2012 at the following address:

Fisheries and Oceans Canada
Regional Data Unit
#200 - 401 Burrard St
Vancouver, B.C. V6C 3S4
Fax: (604) 666-9008

6 LICENSING

6.1 Fisher Identification Number

In 2006 and 2007 DFO introduced unique Fisher Identification Numbers (FIN) that have been assigned to all Pacific commercial harvesters. The FIN allows for fast, easy, and reliable on-grounds identification of fish harvesters for data collection, fisheries management and enforcement purposes. Once a FIN is assigned to a fish harvester, that individual will reference the FIN when identifying him or herself in subsequent business dealings with both the department and service contractors; for example filling in the FIN field on logbooks, noting the FIN when hailing, landing catch, etc. As the FIN is now used during normal business interactions with DFO and contractors, fish harvesters will no longer need to provide detailed personal information identifying such items as gender or date of birth. Once the FIN is issued to a fisher, it will not change from year to year. More information on FIN may be obtained from your DFO fisheries manager, or the Pacific Fishery Licensing Unit (PFLU).

6.2 Licence Categories

A spawn on kelp category J or a communal commercial category FJ licence is required to participate in this fishery. Spawn on kelp category J or FJ licence eligibilities are limited entry and party-based.

6.2.1 Number of Licences by Area

See Table 7 for details on how many licences are assigned to each area.

Table 7: Number of Licences Assigned by Area

Stock Assessment Area	Area	Number of Licences	
		All Licenses	Licences in Open Areas
HG	Area 2 East - Closed	10	0
PRD	Area 3/4	7	7
	Area 5	3	3
CC	Area 6 – Closed	2	0
	Area 7 – Closed	10	0
	Area 7/8 (Illahie Inlet) – Closed	3	0
WCVI	Area 23/24/25	4	3
Minor Areas	Area 27	3	3
	Area 2 West*	3	6
Other	Area 12	1	1
	Area 10 – Closed	3	0
Total		46	20

* *Not a permanent allocation, but has been included in the totals for 2012 only. Number of opportunities may change each year and are available to Area 2E licence eligibility holders only. See Section 7.6 for more detail.*

6.3 Licence Fees

The annual spawn on kelp licence fee for a category J licence is \$10,009.59 and is not affected by overages and underages from the previous year. Licence fees for communal commercial licences are collected through the Aboriginal Fisheries Strategy Comprehensive Fisheries Agreement.

6.3.1 Zero Quota - Zero Fee Option

Spawn on kelp licence eligibility holders have the option of electing a zero quota option for the 2012 season. The licence fee associated with this option is zero.

Spawn on kelp licence eligibility holders electing a zero quota are still required to submit a licence application in order to maintain the licence eligibility. An application form for the zero quota - zero fee option may be obtained by contacting the Prince Rupert Pacific Fishery Licence Unit (PFLU).

6.4 Licence Application

Spawn on kelp licence eligibility holders must submit an application with the required fees to a Pacific Fishery Licence Unit (PFLU), by December 31 of the fishing year in order to maintain their eligibility, whether harvesting will take place or not.

The licence eligibility holder must sign the application. Where the licence eligibility holder is a company or a First Nations group, only the authorized signatory(s) on record may sign the application. The PFLU must have on record a current BC Company Summary and a copy of either a Confirmation of Signing Authorities or an Amendment to Confirmation of Signing Authorities identifying the signing authorities for a company or First Nations group.

For spawn on kelp licences introduced for First Nations groups in 1991 and 1992, where all roe herring gill net retirement obligations have not yet been met, the annual requirement to designate roe herring licences as inactive must be met by January 10 of each calendar year. This deadline must be adhered to for both inactive and/or any roe herring gill net retirements as they may have an impact on quota allocations for the remainder of the roe herring gill net fleet.

6.5 Licence Requirements

Prior to licence issue, the licence eligibility holder must ensure that:

- A registered commercial fishing vessel is designated as the operating vessel (a maximum of three operating vessels may be designated). Designated vessels must be registered as a commercial vessel with the PFLU although vessels do not have to hold a vessel based licence eligibility.
- Proof of participation in a Department approved spawn on kelp port monitoring program.
- If an operating vessel is not currently a registered commercial fishing vessel the following must be submitted or on record with the PFLU:
- A completed Application to Register a Commercial Fishing Vessel and applicable fees of \$50.00;
- Ownership documents: if the vessel is licensed under the Canada Shipping Act, either the Bill of Sale or a copy of the vessel's Licence Certificate; if the vessel is registered under the Canada Shipping Act, either the Registered Bill of Sale or the amended Certificate of Registry;
- A marine surveyor's report dated after May 1, 1989 that has been conducted in accordance with Fisheries and Oceans Canada current Vessel Measurement Guidelines. The report must state the overall length, depth, and breadth of the

- vessel and contain current bow, stern and side profile photographs of the vessel signed and dated by the marine surveyor; and
- An approved Fish Hold Inspection Report (for a newly registered vessel).
 - A Vessel Registration Number (VRN) will be issued. The VRN must be affixed to the vessel according to the Pacific Fishery Regulations, 1993. For further details on registration requirements, please see the Application for Commercial Fishing Vessel Registration, available from a PFLU.

Note that pond set up or harvesting is not permitted prior to licence issue.

6.6 Area 2W Licensing Process

The Department currently provides opportunities to for Area 2 East licence eligibility holders to harvest in Area 2 West. As a first priority, the Department requests that a consensus-based proposal for the selection of participants to harvest the expected use for the area be submitted to the Spawn on kelp Coordinator by November 15, 2011 for review.

In the absence of an acceptable consensus proposal, a lottery process will be used to select the appropriate number of participants for the licences being allocated. In the event a lottery is held, a lottery application will be sent to the ten Area 2 East licence eligibility holders. Completed applications must be received at the Prince Rupert Pacific Fishery Licence Unit (PFLU) by December 2, 2011.

6.7 Licence Documents

6.7.1 Valid Period

Spawn on kelp licence documents are valid from the date of issue to December 31 of each calendar year.

6.7.2 Replacements

Replacement for lost or destroyed licence documents may be obtained by completing a Declaration Concerning Licence Document form. Contact a PFLU for further details.

6.7.3 Vessel Redesignation

Vessel redesignation after licence issuance is permitted. An Application for Vessel Redesignation must be completed and submitted to a PFLU for approval. The application form may be found online at:

<http://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/forms/2009/VesselRedesignation.pdf>

Licence holders must:

- Ensure all requirements for licence issuance, detailed above are met with regard to the replacement vessel.
- Return the current year licence documents and validation tabs with the redesignation application.

APPENDIX 9. COMMERCIAL FISHING PLAN FOR FOOD & BAIT HERRING

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1 PURPOSE

This document is a Commercial Fishing Plan for food and bait herring in British Columbia, for the period from November 7, 2011 to February 9, 2012.

2 COMMERCIAL FISHERY OVERVIEW

The commercial herring fishery began in 1877 with the first commercial harvest taken by beach seine. Between 1877 and 1906, annual harvest increased to 500 tons, with the majority of fishing occurring near Vancouver and on the east coast of Vancouver Island. In 1906 the dry salt market developed in China and demand for herring increased dramatically. By 1909 the annual harvest rose to 30,000 tons and between 1909 and 1919 ranged from 15,000 to 35,000 tons. During World War I the dry salt market decreased but the demand for canned herring increased, and between 1919 and 1927 85,000 tons were harvested. The dry salt market began declining by the mid-1930s while the reduction fishery developed. Between 1968 and 1971 the reduction fishery was shut down due to a collapse of the B.C. herring stocks. It was at this point that the food and bait fishery continued with harvests in the range of 5,000 tons. The majority of this harvest was used as halibut bait.

In the mid 1970s, the European stocks collapsed and a Europe market for British Columbia herring developed. As a result, food and bait harvest increased to a peak of 20,000 tons in 1977. The stocks in Europe quickly rebuilt decreasing the demand for food and bait herring from B.C. By 1988, due to the roe herring fish harvesters' concerns that the large amount of herring being exported to Alaska was taking away from the high value roe fishery, a 50 ton individual vessel quota system was implemented with a coast-wide limited of 1,500 tons. Since that time the markets for domestic food and bait herring have been limited with harvest varying from 500 to 1200 tons annually. A Food and Bait herring, category ZM, licence is required to participate in this fishery. Food and Bait herring licences are party based, and are issued by way of lottery draw each year. The allocation for each ZM licence has been 50 short tons. For the current season each lottery allocation will be for 60 tons.

3 FOOD AND BAIT HERRING FISHERY REPRESENTATION

The Herring Industry Advisory Board (HIAB) provides advice on issues affecting commercial Roe Herring and Food and Bait fisheries. This role includes submitting recommendations for Food and Bait Herring, and Roe Herring harvesting plans for all areas with a Roe Herring TAC. The HIAB has 10 seats on the IHHPC. The 10 participants are selected by the Roe Herring sector from a pool of: (a) 10 individuals elected by Roe Herring Licence holders (5 seine and 5 gill net); (b) 4 appointed processors; and (c) 5 appointed individuals representing: the United Fishermen and Allied Workers Union; the Native Brotherhood of BC.; the Aboriginal Fishing Vessel Owners Association; the Fishing Vessel Owners Association, and the Herring Conservation & Research Society (HCRS).

4 MANAGEMENT MEASURES FOR THE DURATION OF THIS PLAN

4.1 Current Management Issues

Allocation to the Food and Bait fishery has fluctuated based on market requirements over time. As a result of increased interest in this fishery and development of global markets, and as recommended by the Herring Industry Advisory Board (HIAB), the allocation to this fishery will be 60 tons (one licence) for the Prince Rupert area and 6,000 tons (one hundred licences) for the Strait of Georgia area for the 2011/2012 season. It is anticipated that there may be further interest in additional quota allocated to this fishery in future years if market developments are successful.

Catch monitoring and safe fishing practices continue to be important to all fisheries in the Pacific Region. In order to monitor and address potential issues in the Food and Bait fishery, for the 2011/2012 season there will be 100% at sea observer coverage. In addition, fishing hails, vessel logbooks and 100% dockside weight validation are requirements in the Food and Bait fishery. There will be an effort limit of active vessels established for the duration of the food and bait fishery. The management controls and measures for this fishery will be assessed, and future management adjustments may be made to address emerging fishery developments. For this season, there will be an additional license condition in place that requires that all herring from the set must be retained, unless the set must be released due to vessel safety concerns. This change has been made to reduce the impacts of fish loss from compression in the net during the pumping process.

In order to address identified issues regarding the difficulty of achieving the precise 60 ton quota allocated to each ZM licence per trip, a program to allow reallocation of unfished quota assigned to another ZM designated vessel will be continued for 2011/2012. The transfer documents and procedures will be available from PFLU at the time of licence issuance. This process is not intended for the reallocation of entire quotas from licences (this is facilitated by vessel redesignation under the current licensing process), but rather to allow flexibility for small amounts of quota to be reallocated to another licence. Multiple licences may be designated to a single vessel, and the previous restriction of maximum four licences will not be in effect.

Fish harvesters are requested to operate cooperatively in this fishery both to increase safety for all vessels, and work within licence quotas while minimizing impact on the herring resource.

4.2 Financial Responsibilities

Licence eligibility holders are responsible for ensuring they are compliant with all DFO monitoring requirements for this fishery, including all associated monitoring costs.

4.3 Allocation and Harvest Levels

4.3.1 Prince Rupert

A total of 60 tons will be allocated for the Prince Rupert Area. A total of one eligible applicant will be identified through a lottery draw.

4.3.2 Strait of Georgia

A total of 6,000 tons will be allocated for the Strait of Georgia Area. A total of 100 eligible applicants will be identified through a lottery draw.

4.4 Open Times

The IFMP is in effect from November 7, 2011 to February 9, 2012. Fishing will be permitted to eligible vessels designated with a ZM licence from 00:01 hours November 7, 2011 to 23:59 hours February 9, 2012.

4.5 Open Areas

The following areas are identified as fishing areas, subject to in season decisions on specific areas that will be opened by Variation Order following the process as described by gear type and area, and subject to the permanent area closures detailed in the following section. Areas may be closed in the event that small or unsuitable fish are being released, or if substantial incidental bycatch occurs. If stock concerns are identified, some Areas or Subareas may close on short notice.

Vessel masters are advised to check the DFO fishery notice internet site, prior to commencing fishing, at:

http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm?pg=search_options&lang=en&id=commercial

Fishing will be permitted by eligible vessels in the Prince Rupert and Strait of Georgia in the following Areas and Subareas, with the exception of the closures noted in the Permanent Area Closures, and subject to Conditions of Licence, and in season fishery notices.

4.5.1 Prince Rupert District

Area 3: Subareas 3-1 to 3-3, and portions of Subarea 3-4 inside a line commencing at Sarah Point northward to a red can buoy located at Inskip Passage, thence easterly to the northernmost point of the estuary of Neaxtoalk Lake, thence northward along shore to the markers in Dudevoir Pass, thence along the shore of Maskelyne Island to a marker approximately one half mile southerly of Maskelyne Point, thence to Pointer Rocks light thence southward to Gordon Point on Finlayson Island, thence southward along the shore to Sarah Point. Subarea 3-4 will also be open south of a line from Sarah Point to Hook Point, Subarea 3-7

Area 4: All Subareas will be open. The Harbour Authority of Prince Rupert and Port Edward must be notified prior to any fishing activity within harbour limits as shown on chart No. 3957 published by the Canadian Hydrographic Service.

Area 5: Subareas 5-1, 5-2, 5-3 and 5-10.

4.5.2 Strait of Georgia

Area 13: Subareas 13-7 to 13-10, excluding that portion of Subarea 13-7 inside a line from a fishing boundary sign at Separation Head to a fishing boundary sign at the north-westerly entrance to Deepwater Bay.

Area 14: Subareas Area 14-1 to 14-13, and 14-15

Area 17: Subareas 17-1 to 17-3 excluding that portion north-easterly of a line from Cayetano Point on Valdes Island to Alcalá Point on Galiano Island, 17-4 to 17-6, 17-8 to 17-13 and 17-15 to 17-19, 17-21.

Area 18: Subareas 18-1, 18-2 excluding that portion north-easterly of a line from Collinson Point on Galiano Island to Enterprise Reef Buoy to Crane Point on Mayne Island, 18-3, 18-4, 18-5, 18-6, 18-9, 18-11.

Area 29: Subarea 29-5 only.

4.6 Permanent Area Closures

4.6.1 Strait of Georgia

Area closures are detailed below. These areas are closed due to navigation concerns, sensitive fish habitat, or concerns regarding bycatch of other species or other management considerations. There may be additional closures in season by Variation Order and fishery notice.

Area 13:

Deepwater Bay: That portion of Subarea 13-7 easterly of a line from a fishing boundary sign at Separation Head across to a fishing boundary sign at the northwestern entrance to Deepwater Bay.

Area 14:

14-14 (Comox Harbour)

Area 17:

Porlier Pass: A portion of Subarea 17-3 north-easterly of a line from Cayetano Point on Valdes Island to Alcalá Point on Galiano Island.

Ladysmith Harbour: Subarea 17-7.

Nanaimo Harbour: Subarea 17-14.

Nanoose Harbour: Subarea 17-20.

New for 2011/2012

Kulleet Bay: A portion of Subarea 17-5 westerly of a line from Coffin Point on Vancouver Island to Yellow Point on Vancouver Island.

Gabriola Pass: The waters of Gabriola Pass described as portions of Subareas 17-10 and 17-17 bounded by a line from Dibuxante Point on Valdez Island, thence following the northerly shore of Valdez Island to Cordero Point on Valdez Island, thence to the most southerly tip of Breakwater Island, thence following the westerly shore of Breakwater Island to the most northerly point on Breakwater Island, thence due west to Gabriola Island, thence following the southerly shore of Gabriola Island to the point of land located at 49 07.777 N 123 43.045 W, thence in a strait line southerly to the point of commencement at Dibuxante Point.

Area 18:

Maple Bay: Subarea 18-7.

Cowichan Bay: Subarea 18-8.

Fulford Harbour: Subarea 18-10.

Active Pass: That portion of Subarea 18-2 north-easterly of a line from Collinson Point to Enterprise Reef Buoy to Crane Point on Mayne Island.

Area 29:

Fraser River: All subareas with the exception of 29-5 are closed.

4.6.2 *Prince Rupert*

No closed areas identified.

4.7 Participation Requirements - Gear

A herring purse seine must not exceed 410m (225 fathoms) in length, and the mesh size shall not be less than 25mm (1 inch) extension measure.

Vessels should have a full sized herring seine, along with all the associated gear (i.e. pumps, winches, power skiffs), to fish and haul the gear, as well as adequate electronic equipment for locating and estimating herring schools.

A properly functioning chilled seawater (C.S.W.), or refrigerated seawater (R.S.W.), system is required for all vessels participating in the fishery.

To maintain manageability and safety in this fishery, vessels will be requested to operate in a minimum of pairs during fishing operations.

Under the Canada Shipping Act, all vessels fishing or packing herring or capelin are required to have a valid stability certificate/booklet on board the vessel.

4.8 Catch in Excess of Quota

Vessel masters must operate in a manner that ensures that over harvest does not occur. The licensed vessel is permitted to catch and retain a maximum of 60 short tons of herring per license. The pilot program to allow for reallocation of unfished quota

Fisheries and Oceans Canada

Appendix 9 – Commercial Fishing Plan for Food & Bait Herring
2011/12 Pacific Herring Integrated Fisheries Management Plan

assigned to another vessel will be continued for 2011/2012. The transfer documents and procedures will be available from PFLU at the time of licence issuance.

5 LICENSING

5.1 Fisher Identification Numbers

Since 2006 unique Fisher Identification Numbers (FIN) have been assigned to all Pacific commercial harvesters. The FIN allows identification of fish harvesters for data collection, fisheries management and enforcement purposes. Once a FIN is assigned to a fish harvester, that individual will reference the FIN when identifying him or herself in subsequent business dealings with both the department and service contractors; for example filling in the FIN field on logbooks, noting the FIN when hailing, landing catch, etc. Once the FIN is issued to a fisher, it will not change from year to year. More information on FIN may be obtained from your DFO fisheries manager, or the Pacific Fishery Licensing Unit (PFLU).

5.2 Licence Category

A Food and Bait herring, category ZM licence is required to participate in this fishery. Food and Bait herring licences are party based. Those eligible to apply for a licence are chosen by way of an annual lottery draw.

5.3 Lottery Application

Lottery applications will be available from any Pacific Fishery Licence Unit beginning September 30, 2011. Applications will also be available on the PFLU Website at <http://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/index-eng.htm> Applications must be submitted to the Vancouver PFLU by 16:00 hours October 11, 2011.

Applications for a licence to participate in the Food and Bait herring lottery may be submitted in person, by fax or by mail to the Vancouver Pacific Fishery Licence Unit (PFLU) by the deadline date. Refer to the 2011/12 Application to participate in the Food and Bait Herring Lottery for further details. Only one application per vessel may be submitted. Duplicate applications will not be entered into the lottery.

The vessel owner must sign the lottery application. If the vessel owner is a company, the PFLU must have on record a current BC Company Summary and a copy of either a Confirmation of Signing Authorities or an Amendment to Confirmation of Signing Authorities form listing the signing authorities.

Lottery applicants must:

- Designate a vessel that has been designated for a roe herring seine (category HS) or as a harvest vessel for a spawn on kelp (category J) licence eligibility within the past five years (2007 – 2011),
- Ensure that the designated vessel has functioning Refrigerated Seawater (R.S.W.) or Chilled Seawater (C.S.W.) capability,
- Select one fishing area (e.g. Prince Rupert or Strait of Georgia)

- Be a vessel registered in Canada in accordance with the provisions set forth in Part 2 of the Canada Shipping Act

It is anticipated that the lottery draw will take place at 401 Burrard Street in Vancouver on October 14, 2011 by DFO staff and industry representatives. If there are less applicants in the Strait of Georgia than available lottery draws, all applicants will be reentered into the lottery and the remaining licence draws completed until all 100 licence eligibilities drawn. A Notice to Industry naming the successful applicants will follow the draw.

All successful applicants will receive a personalized 2011 Application for Food and Bait. This application must be submitted to a PFLU along with the required licence fee and a 2011/12 category ZM licence issued prior to the vessel being permitted to harvest.

5.4 Licence Application and Issuance

Application

Eligible applicants, selected in the lottery draw, must submit a completed Application for Food and Bait Herring Licence along with the required fee of \$30.00 to a PFLU. The applicant must sign the application. If the applicant is a company, the PFLU must have on record a current BC Company Summary and a copy of either a Confirmation of Signing Authorities or an Amendment to Confirmation of Signing Authorities form listing the signing authorities.

The vessel identified on the lottery application does not have to be the vessel designated to harvest under any resulting food and bait herring licence. Eligible applicants may designate any vessel that meets eligibility requirements.

Issuance

Prior to licence issuance, proof of monitoring will be required via a letter of agreement from the service provider verifying their agreement with the delivery of a fishery monitoring program.

Prior to licence issuance, eligible applicants must designate a vessel that is registered in Canada in accordance with the provisions set forth in Part 2 of the Canada Shipping Act that:

- Has been designated for a herring seine, (category HS) or as a harvest vessel for a spawn on kelp, (category J) licence within the past five years (2007-2011).
- Has functioning R.S.W. or C.S.W. capability.
- Provide proof of monitoring via a letter from the service provider verifying their agreement with the delivery of a fishery monitoring and catch reporting program.

5.5 Vessel Redesignation

Vessel redesignation is permitted after licence issuance, at any time during the fishing year. An Application for Vessel Redesignation must be completed and signed by the eligible applicant, and all requirements must be met.

Prior to vessel redesignation, the eligible applicant must:

- Complete, sign and forward the Application for Vessel Redesignation.
- Where the eligible applicant is a company or Aboriginal group, the Pacific Fishery Licence Unit must have on record a current BC Company Summary and a copy of either a Confirmation of Signing Authorities or an Amendment to Confirmation of Signing Authorities form advising who the signing authorities are.
- Return the previously issued licence and tabs.
- Confirm that the conditions of the licence have been met (e.g. that up-to-date logbooks and landing information has been submitted to the service provider).
- Provide proof of monitoring via a letter from the service provider verifying their agreement with the delivery of a fishery monitoring and catch reporting program.
- Designate a registered Canadian commercial fishing vessel that:
 - has been designated for a herring seine (category HS), or as a harvest vessel for a spawn on kelp (category J), licence within the past five years
 - has a functioning R.S.W. or C.S.W. capability

5.6 Licence Documents

Food and Bait herring licences are valid from the date of issuance to February 9th, 2012. Replacements for lost or destroyed licence documents may be obtained by completing a Declaration Concerning Licence Documents form. Please contact a PFLU for further details.

6 FISHERY MONITORING REQUIREMENTS

The fishery monitoring requirements for this fishery include fishing hails, at sea observers, harvest logs and dockside weight validation. These components are an integral part of the sustainable management of this fishery, and ensure alignment with the DFO monitoring policy.

6.1 Letter of Agreement

Prior to licence issuance, proof of monitoring will be required via a letter of agreement from the service provider verifying their agreement with the delivery of a fishery monitoring program.

6.2 Harvest log

Harvest set logs are available from the service provider. The vessel master is responsible for the provision and maintenance of an accurate record of daily harvest operations. Catch information must be recorded in the harvest log by midnight of the day in which the activity occurred, or prior to the at sea observer disembarking the vessel, whichever occurs first. The log must be kept aboard the licensed vessel, and must be produced for examination on demand of a fishery officer or fishery guardian.

The original white page copy of the log must be received by the designated service provider no later than 14 days following the last active fishing day by the licensed vessel for the 2011/2012 season.

6.3 Hails

Telephone hails to the Service Provider must be made between the hours of 0800 to 1600 hours, Monday to Friday, but not on statutory holidays. Upon failure to arrive at the fishing location within 48 hours of the hail out time, the vessel master shall hail the vessel name, VRN, and details of the change in fishing plans.

The vessel master shall be responsible for making an oral report (hail) to the service provider to report events and information required by the licence conditions. Each hail will be documented with a unique Hail Confirmation Number in the appropriate location in the Harvest Log as detailed in the licence conditions and information sheets provided with the logbooks from the service provider.

6.3.1 Notification of Fishing (Hail Out)

The master of a vessel participating in the Food and Bait fishery will be required to notify the monitoring program service provider, a minimum of 24 hours prior to the intended fishing date. The information that shall be provided is detailed in the Licence Conditions issued with the ZM licence, and includes:

- Vessel Master name
- Vessel Master FIN
- Vessel name
- Vessel registration number (VRN)
- Onboard Observer name
- The subarea (s) to be fished
- The anticipated date and time fishing will begin

6.3.2 Notification of Fishing (Hail In)

The master of a vessel participating in the Food and Bait fishery will be required to notify the monitoring program service provider, a minimum of 12 hours prior to the intended landing time. The information that shall be provided is detailed in the Licence Conditions issued with the ZM licence, and includes:

- Vessel master name
- Vessel Master FIN
- Vessel name
- Vessel registration number (VRN)
- Onboard Observer name
- Catch Location
- Catch estimate
- Anticipated landing time
- Landing Location

6.4 At Sea Observers

Fishing vessels will be required to have at-sea observer coverage by a DFO designated observer while carrying out fishing operations. An observer must be on board prior to the vessel making a seine set. An observer may transfer to another vessel at sea, once the observer duties for the first vessel have been completed, and at the discretion of the observer.

6.5 Landing

All herring shall be delivered to a British Columbia port and must be offloaded within 18 hours of capture. A certified observer must validate the weight of all herring offloaded. Vessel masters are required to make offloading arrangements with the designated service provider. The following landing locations may be used:

- Metro Vancouver
- French Creek
- Prince Rupert
- Quadra Island

To land at another location other than those listed above, contact the Service Provider. It is possible that a surcharge will be charged additional costs of the port monitor.

Schedule B (Part 4 Section 12) of the B.C. Fish Inspection Regulations states: “Where fresh herring is for human consumption, its processing, except icing or chilling, must commence within 24 hours of delivery at the processing establishment and must not be discontinued until the herring is preserved to a degree that assures maximum quality of the product.”

6.6 Dockside Validation

All landed fish must be verified by a dockside observer provided by the service provider. All herring harvested under the authority of this licence must be validated at the point and time of landing. The landing of any fish is not permitted unless an observer is present to authorize the commencement of weight verification. All weights must be determined using a scale approved by Industry Canada.

The observer may inspect fish holds, freezers and other areas where fish may be stored. It is the responsibility of the vessel owner or master to provide safe access to the vessel holds for inspection and to ensure that the vessel does not leave the offloading site prior to completion of the fish hold inspection by the observer.

6.7 Fish Slip Requirements

It is a Condition of Licence that an accurate written report shall be furnished on a fish slip of all herring caught and retained under the authority of this licence. The report shall be mailed within seven days of off-loading to:

Fisheries and Oceans Canada
Catch Statistics Unit

200 - 401 Burrard Street
Vancouver, B.C. V6C 3S4

Fish slip books may be purchased at the above address, or at most Fisheries and Oceans offices. Phone (604) 666-2716 for more information.

6.8 Compliance with other Federal and Provincial Legislation and Regulations

Fish harvesters are responsible for compliance with all federal and provincial laws and regulations pertaining to fishing operations.

APPENDIX 10. COMMERCIAL FISHING PLAN FOR SPECIAL USE HERRING

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1 PURPOSE

The purpose of the special use herring fishery is to provide opportunities to harvest herring for a variety of different uses such as bait, food, and feed for zoo and aquarium animals. These opportunities are not available during other herring fisheries such as the roe herring fishery.

2 COMMERCIAL FISHERY OVERVIEW

While small, the special use herring fishery has a complicated and varied history, due to the evolution of its complex licensing structure, which was originally developed to track the end use of herring.

In 1995, DFO replaced the use of locally issued permits with centrally issued licences. The specific end uses of the permits were retained as licence purposes, which directed how the harvested fish was to be used. While there have been as many as seven licence categories in this fishery, there are currently five categories remaining; the Sport Bait (ZY1), Commercial Bait (ZY2), Human Food and Bait (ZY3), Zoo and Aquarium (ZY4), and Personal Bait (ZX) categories. The specific histories of the active ZY licence categories follow.

2.1 Sport Bait Herring (ZY1)

In the late 1970s and through the 1980s there were strong recreational fisheries. To supply bait to these fisheries, three ton impoundment permits were issued to the small live bait operations that had become prolific throughout the Strait of Georgia, with scattered operations into the North Coast area. These permits were to be used in conjunction with fishing permits which permitted harvest of herring for personal use or for the delivery of herring to a processor or operator possessing a valid impoundment permit.

As the recreational fisheries declined, so too did the number of live bait operators. While some interest remained in small live bait operations, other parties became interested in increasing the scale of their operations and producing fresh and frozen bait. In the majority of cases, this increase was, and is, accomplished by using the ability to stack multiple licences on one vessel to harvest herring for one individual or company's operations, as opposed the original intent of harvesting for multiple operations worked by multiple licence holders. In 2007, the number of licences that could be held on a vessel was increased from one to five at one time (licence stacking). There are also unique licenses in this category (See Section. 7.3.1)

2.2 Commercial Bait Herring (ZY2)

The ZY2 licence category was developed in 1995 as a means of providing quota for the purpose of producing bait to be used in commercial fisheries such as halibut. Prior to this date, fishing activity for commercial bait had been underway for many years, especially

in the Prince Rupert District, and was managed through the issuance of permits. The ZY2 category is operationally the same as the ZY1 category, permitting the ponding of herring using 3 ton licences. There are also unique licenses in this category (See Section. 7.3.1)

2.3 Human Food and Bait (ZY3)

In the early 1980s, opportunity to harvest herring for human food was provided through the issuance of three ton permits for fresh, local sales only, although four 50 ton permits were made available to Fjord Pacific Marine Industries Ltd. (Fjord) for more industrialized food processing as a unique quota.

When the ZY3 licence category was introduced in 1995, the three ton and four 50 ton quotas continued to be issued through licences. The three ton licences were made available until 2006/07; although they were not accounted for in the ZY3 expected use allocation. In 2007/08, these 3 ton licences were discontinued, and in 2009 the allocation for ZY3 was reduced to 150 tons, distributed across three 50 ton licences as a unique quota to one applicant.

DFO will be providing for the ZY3 allocation for 2011/12.

2.4 Zoo and Aquarium (ZY4)

Historically the quota in this licence category was available to any zoo or aquarium operating in Canada or the United States, upon request to DFO Fisheries Management. Successive management decisions were made that first restricted the eligibility to Canadian operations only, and then to BC operations only. Currently the ZY4 quota is available only to the Vancouver Aquarium, as a unique quota. Should a future request be made by a zoo or aquarium other than the current participant it would not be granted, as there is no additional allocation for the ZY4 licence category. There is also a unique license in this category (See Section. 7.3.1)

2.5 Personal Bait (ZX)

This licence category provides commercial fishers with the opportunity to harvest up to 1 ton of herring for personal (non-sale) use.

3 MANAGEMENT MEASURES FOR THE DURATION OF THIS PLAN

3.1 Changes from Previous Season

New for this season, there will be an additional license condition in place that requires that all herring from a seine set must be retained, unless the set must be released due to vessel safety concerns. This change has been made to reduce the impacts of fish loss from compression in the net during the pumping process.

3.2 Events Calendar

Table 8: Events calendar for 2010/11 season.

Month	Date	Event
2011		
November	6	Special Use 2010/11 fishery closes at 23:59h.
	7	Special Use 2011/12 fishery opens at 00:00h.
	15	ZX Landing Report for 2010/11 required.
December	1	Release or validation of ponded herring from 2010/11 by 23:59 hours as required by conditions of licence.
	15	Original white page copy of logbook from 2010/11 to service provider (ZY only).
2012		
January		
February	9	Special Use fishery closes at 23:59h. All herring must be ponded or landed by this time.
March	1	Release or validation of ponded herring by 23:59 hours as required by conditions of licence.
April		IHHPC Post-Season Review meeting.
May	1	Special Use fishery re-opens at 00:00h.
June		
July		
August		
September		CSAP Stock Assessment Results meeting.
		IHHPC Fisheries Management Planning meeting. Draft Special Use Commercial Plan presented for comment.
October		Draft 2012/13 IFMP publicly released for review and feedback.
		IHHPC Fisheries Management Planning meeting.
		Final 2012/2013 IFMP released publicly.
		2012/13 Special Use applications available.
November	6	Special Use 2011 / 2012 fishery closes at 23:59h. All herring must be ponded or landed by this time.

3.3 Open Times

Fishing for special use herring is permitted from 00:00 hours November 7, 2011 until 23:59 hours February 9, 2012, and 00:00 hours May 1, 2012 to 23:59 hours November 6, 2012.

3.4 Open Areas

The following areas are identified as fishing areas, subject to in season decisions on specific areas that will be opened by Variation Order following the process as described by gear type and area, and subject to the permanent area closures detailed in Section 3.6 (Table 9):

Table 9: Open areas for the 2010/11 season.

Major Stock Assessment Areas	Strait of Georgia	13-1 through 11, 14 through 19, 28, 29
	Prince Rupert District	3, 4, 5

Note that these areas may be closed in season in the event that small or unsuitable fish are being released, or if substantial incidental bycatch occurs. If stock concerns are identified, some Areas or Subareas may close on short notice.

Note that requests to harvest in regions outside the major stock assessment areas or areas with limited assessment information will require additional consideration and may not be approved.

Vessel masters are advised to check the DFO fishery notice internet site, prior to commencing fishing, at:

http://www-ops2.pac.dfo-mpo.gc.ca/xnet/content/fns/index.cfm?pg=search_options&lang=en&id=commercial

3.5 Precautionary Closures

The stock abundance forecast for the following areas are below or slightly above the respective Cut-off Levels. DFO is recommending a precautionary regime for the 2011/12 season and no commercial harvesting will be permitted:

Table 10: Precautionary closures for the 2011-2012 season.

Major Stock Assessment Areas	Haida Gwaii (Area 2E)	2-3 through 2-19, 2-21 through 2-37
	Central Coast	Area 6, Area 7, and Area 8
	West Coast Vancouver Island	23 through 25

3.6 Permanent Area Closures

The following areas are permanently closed to the special use fishery. Note that there may be additional closures in-season by Variation Order and Fishery Notice. Consult with the local fisheries office before fishing in an area.

Where a major stock assessment area is closed for conservation concerns, the permanent closures of specific Subareas are not listed. To obtain a detailed list of all permanent Subarea closures, contact your local Area Resource Manager (see Contacts).

3.6.1 Strait of Georgia

Table 11: Subarea closures in the Strait of Georgia.

Area 13 That portion of Subarea 13-7 easterly of a line from a boundary sign at Separation Head to a fishing boundary sign at the northwestern entrance to Deepwater Bay [Deepwater Bay]

Area 14 Subarea 14-14 [Comox Harbour]

Area 16 Subarea 16-3 [Bargain Bay]

Subarea 16-4 [Pender Harbour]

Subarea 16-5 [portion of Sechelt Inlet]

That portion of Subarea 16-10 within a radius of 0.3 nautical miles from the mouth of Sakinaw River

Area 17 A portion of Subarea 17-3 northeasterly of a line from Cayetano Point on Valdes Island to Alcala Point on Galiano Island [Porlier Pass]

Subarea 17-7 [Ladysmith Harbour]

Subarea 17-14 [Nanaimo Harbour]

Subarea 17-20 [Nanoose Harbour]

Area 18 That portion of Subarea 18-2 northeasterly of a line from Collinson Point to Enterprise Reef Buoy to Crane Point on Mayne Island [Active Pass]

Subarea 18-7 [Maple Bay]

Subarea 18-8 [Cowichan Bay]

Subarea 18-10 [Fulford Harbour]

Area 19 Subarea 19-1 [Victoria Harbour]

Subarea 19-2 [Esquimalt Harbour]

**Subarea 19-6 [Sidney Spit Marine Park]
Subareas 19-7 to 19-12 [Saanich Inlet]**

Area 28 All Subareas

Area 29 Subareas 29-5, 29-7 to 29-17 [Fraser River]

3.6.2 Prince Rupert District

No Subarea closures for this Area.

3.6.3 Other Areas

**Area 12 That portion of Subarea 12-4 inside a line running from Lewis Point to Ella Point [Beaver Cove]
Subarea 12-20 [Parsons Bay]**

3.7 Participation Requirements

The special use herring fishery is an unlimited fishery, licences are not limited entry and eligibility to obtain licence issuance is not carried forward from one year to the next. Licences for participation in the special use herring fishery are open to any interested party provided that the specific licence requirements and eligibility criteria described in Section 7.5 and 7.6 have been met. Unique quotas for specific parties for specific purposes are described in Section 7.3.1.

A valid special use herring licence is required prior to any special use fishing activity, including the set-up of any herring enclosure (i.e. floating frame with web).

3.8 Allocation and Harvest Levels

Specific quotas allocated to each special use licence category are found in Table 12:

Table 12: Special use allocation by licence category.

Licence Type	Area	Allocation (tons)	Available Licences
ZX – Personal Use	SOG	25	25
	PRD	10	10
	SOG	517	67*

Licence Type	Area	Allocation (tons)	Available Licences
	PRD	50	16
ZY2 – Commercial Bait	PRD	70	16*
ZY3 – Human Food and Bait	SOG	150	3*
ZY4 – Zoo and Aquarium	SOG	110	1*
Grand Total		932	138

*Includes unique quotas. See section 7.2.

3.9 Catch in Excess of Quota (Overage)

Vessel masters must operate in a manner that ensures that over harvest does not occur. The harvest of fish in excess of the licensed amount is unlawful.

No person who is fishing under the authority of a licence issued for the purpose of commercial fishing shall dump from a vessel any fish that has been caught in accordance with the Fisheries Act and the Regulations made thereunder.

3.10 Compliance with other Federal and Provincial Legislation and Regulations

Fish harvesters are responsible for compliance with all federal and provincial laws and regulations pertaining to fishing operations. This includes compliance with the Navigable Waters Protection Act for any structures related to fishing operations.

4 GEAR

This section is a general description of gear used in fishing for special use herring. Please refer to the license conditions for specifics on eligible gear for each license.

4.1 Gill Net

- Gill nets are permitted for use by ZX licence eligibility holders only.
- No person shall use more than one section of herring gill net. No person shall use a herring gill net that exceeds 135 m in length.
- No person shall have a gill net that is more than 100 meshes in depth. The gill net mesh size shall not be greater than 64 mm (2.5 inches).
- Shaker panels shall not exceed a depth of 2 m with a mesh size no less than 150 mm (6 inches).
- Gill nets must be marked on both ends with buoys of similar colour, no less than 125 cm in circumference.

4.2 Seine

- Seine nets are permitted for use by ZY licence eligibility holders only.
- A herring purse seine shall not be greater than 410 m (225 fathoms) in length, and mesh size not less than 25 mm (1 inch) extension measure.
- When herring are caught for holding in a herring enclosure, the bunt of the seine net must be knotless web. Web used in the construction of impoundments must also be knotless.

4.3 Hoop Nets and Dip Nets

- A bag-shaped net that is hung on a frame to which a line (hoop net) or a handle (dip net) is attached.

4.4 Herring Enclosures (ponds)

Note that a valid ZY1 licence is required before putting any webbing in the water for use as a herring enclosure.

4.4.1 Enclosure Construction

- Enclosures must be constructed so that the floating frame can support the weight of an impoundment net and enclosed herring without collapsing.
- The bottom of the herring enclosure net must be maintained so that the bottom of the net is a minimum of 3 m (9 feet) above the substrate under the enclosure at all times.

4.4.2 Enclosure Marking

- Every individual herring enclosure (i.e. floating frame with web) must be marked with the vessel registration number and vessel name in accordance with the licence conditions. Enclosures must also be numbered in a sequential fashion (i.e. Pond 1, Pond 2, etc.) This numbering requirement also applies to single enclosures (i.e. Pond 1).

4.4.3 Webbing

- Any net used in a herring enclosure must be made of knotless web.
- When impounding herring the mesh size of the enclosure shall not be greater than 25 mm.
- Herring impoundments which will not be used within 14 days of cessation of fishing activities (indicated by date of hail) must have all web pulled up or removed.

4.4.4 Predator Deterrence

- The following standards for bird net and predator net systems were piloted during the 2010/11 season and will continue for 2011/12:
- Impoundments that employ a predator deterrence system must meet the following conditions:

- A bird net consisting of contiguous netting with a maximum mesh size of 50 mm by 50 mm (2 inch by 2 inch). The bird net must be pulled tight across the frame of the impoundment.
- A predator net consisting of contiguous netting with a maximum mesh size of 25 mm. The predator net must surround the webbing of the impoundment completely, maintain a space of at least 30 cm (12 inches) between the predator net and the webbing, and maintain a minimum of 3 m (9 feet) above the substrate under the enclosure at all times.

5 MONITORING PROGRAM

Timely and accurate information on harvest and harvesting practices is essential to assess the status of fish stocks and to ensure the conservation and the long-term sustainability of fish resources. Effective monitoring and accurate catch reporting in the special use herring fishery is integral to the effective management of the fishery and herring resource.

The ZY Special Use Herring Fishery Monitoring Program is industry-funded and has been in place since 2007. The program is comprised of a telephone hail in system, vessel harvest logbooks, and dockside weight verification. ZX licences do not participate in the commercial fishery monitoring program, but do submit a landing report at the end of the season.

Additional information on the monitoring program will be provided at the time of licence issuance. Please note that compliance with the monitoring program is a condition of licence. Proof of monitoring via a letter from the service provider will be required prior to licence issuance.

5.1 Service Provider

J.O. Thomas and Associates Ltd. is the industry selected service provider for the special use fishery. Contact information may be found in the Contacts section.

5.2 Letter of Agreement

Prior to ZY licence issuance, proof of monitoring will be required via a letter of agreement from the service provider verifying their agreement with the delivery of a fishery monitoring program.

5.3 Hail Reports

Each vessel master shall be responsible for making an oral report (hail) to the service provider to report events and information required by the licence conditions. The vessel master may designate a person to make hails on his / her behalf, but retains accountability for hails to be performed.

Each hail will be documented with a unique Hail Confirmation Number in the appropriate location in the Special Use Herring Fishery Log Book as detailed in the licence conditions and information sheets provided with the logbooks from the service provider.

Hail Reports provide DFO Resource Management with key information required for timely in-season management and are therefore a priority requirement of the Special Use Fishery Monitoring Program.

5.4 Reporting and Notification Requirements

5.4.1 General

When fishing under a category ZY licence, the vessel master shall report all required information to the designated service provider as detailed in the log books and licence conditions.

No notification is required for category ZX fishing.

5.4.2 Marine Mammal and Seabird Incident Reports

All ponding operations are to complete an incident report for each encounter with a marine mammal or seabird. An incident refers to the types of activities that occur between marine mammals and herring enclosure facilities. This includes system breaches, accidental drowning, and entanglements.

Incident reports are to be faxed to the DFO Reporting Hotline (1-800-465-4336) as soon as an incident is discovered. An incident report form will be provided at the time of licence issuance.

5.4.3 Logbooks

Logbooks are available from the service provider. The vessel master is responsible for the provision and maintenance of an accurate record of daily harvest operations. Catch information must be recorded in the harvest log by midnight of the day in which the activity occurred. The logbook must be kept aboard the licensed vessel, and must be produced for examination on demand of a fishery officer or fishery guardian.

The original white page copy of the log must be received by the designated service provider by December 15, 2012.

5.5 Dockside Monitoring

All landed fish must be verified by a dockside observer and coordinated through the service provider.

Live herring in a quantity less than 500 pieces that are not landed but are removed from the enclosure and sold directly to the public do not require weight verification. However, on the last day of each month, DFO requires the provision of a report via email or fax to the service provider that provides the quantity of individual herring removed from the

enclosure. In addition, the number of pieces removed must be recorded in the vessel logbook.

5.6 At-Sea Observers

In the ZY3 and ZY4 licence categories, and for ZY1 category licences with quotas of 50 tons or more for deliveries of non-ponded herring, fishing vessels will be required to have at sea observer coverage by a DFO designated observer while carrying out fishing operations. An observer must be on board prior to the vessel making a seine set, or the vessel must be in the immediate vicinity of a vessel licensed to this fishery or the ZM Food and Bait fishery that has an observer on board where arrangements have been made with the service provider that the designated observer will carry out duties for both vessels.

6 LANDING

6.1 Landing and Herring Release Times

All herring caught and retained under the authority of this licence from November 7, 2011 to February 9, 2012, shall be ponded no later than 23:59 hours February 9, 2012. Release or validation of all ponded herring must be completed by 23:59 hours March 1, 2012.

All herring caught and retained under the authority of this licence from May 1, 2012 to November 6, 2012, shall be ponded no later than 23:59 hours November 6, 2012. Release or validation of all ponded herring must be completed by 23:59 hours December 1, 2012.

Ponding activity is permitted for this short period as defined above after the February 9 or the November 6 end date of the special use herring fishery harvesting periods. An end of season ponding completion date is required to ensure catch validation occurs within a reasonable time frame after the close of the fishery.

Operations with a maximum annual quota of 3 tons do not need to release herring on the above dates, provided the conditions of licence are met.

6.2 Offloading Regulations

Schedule B (Part 4 Section 12) of the B.C. Fish Inspection Regulations states: “Where fresh herring is for human consumption, its processing, except icing or chilling, must commence within 24 hours of delivery at the processing establishment and must not be discontinued until the herring is preserved to a degree that assures maximum quality of the product.”

6.3 Designated Landing Ports

Special Use Herring may be landed at any port that meets the following requirements:

- Is a Designated Landing Station as per Section 17 of the Pacific Fisheries Regulations⁴;
- Has an Industry Canada Approved weigh scale (valid for duration of fishing season); and,
- Is provincially licensed as a Fish Buying Station or Fish Processing Plant for Roe Herring or for Finfish other than Salmon (valid for duration of fishing season)

OR

Is a Federal Government dock registered with the Harbour Authority Association of BC.

Note that if herring are landed at a government dock, they cannot be transferred to a third party for transport to a processing station, and must be transferred by the party which makes the landing.

The following landing ports may be used:

- Metro Vancouver
- French Creek
- Prince Rupert
- Quadra Island
- Nanaimo
- Campbell River

To land at another location other than those listed above, contact the Service Provider. It is possible that a surcharge will be charged to the operator for travel costs of the port monitor. Alternative landing ports must meet the criteria for a designated landing port.

7 LICENCING

7.1 Fisher Identification Number

The FIN allows for fast, easy, and reliable on-grounds identification of fish harvesters for data collection, fisheries management and enforcement purposes. Once a FIN is assigned to a fish harvester, that individual will reference the FIN when identifying him or herself in subsequent business dealings with both the department and service contractors. As the FIN is now used during normal business interactions with DFO and contractors, fish harvesters will no longer need to provide detailed personal information identifying such items as gender or date of birth.

Once the FIN is issued to a fish harvester, it will not change from year to year. More information on FIN may be obtained from your DFO fisheries manager, or the Pacific Fishery Licensing Unit (PFLU).

⁴ A Landing Station is a building or barge permanently affixed to the shore, provincially licensed as a Fish Buying Station or a Fish Processing Plant.

7.2 Licence Categories

The special use fishery is organized into five licence types, to accommodate for specific needs of the products of this fishery. All bait herring licences are party based, and must be designated to a registered commercial fishing vessel that is eligible for a vessel based commercial licence.

7.2.1 ZX – Personal Use Herring

- Licence purpose: Fish caught under the authority of this licence cannot be sold and are for the sole use of the licence holder.
- 1 ton licences issued to anyone that owns or operates a licensed commercial vessel.
- Licences issued on a first come, first served basis, until the allocation for ZX licences has been reached.

7.2.2 ZY1 – Sport Bait

- Licence purpose: Fish caught under the authority of this licence may only be sold as live bait to sport fishers or frozen for domestic or export sport bait.
- 3 ton licences issued to anyone that owns or operates a licensed commercial vessel.
- Three unique quotas exist for this licence type. These licences are for larger tonnages and as such are restricted to fishing between the dates of November 7, 2011 (00:00h) to February 9, 2012 (23:59h); and October 1, 2012 (00:00h) to November 6, 2012 (23:59h).
- In the Strait of Georgia, multiple 3 ton ZY licences (up to five per vessel) will only be issued between November 7, 2011 to February 9, 2012, and October 1, 2012 to November 6, 2012. Vessels may only stack licences from one licence category at a time.
- Licences will be issued on a first come, first served basis, until the allocation for ZY1 licenses has been reached.

7.2.3 ZY2 – Commercial Bait

- Licence purpose: Fish caught under authority of this licence may be sold only as fresh or frozen bait for commercial use to commercial fishers.
- 3 ton licences issued to anyone that owns or operates a licensed commercial vessel.
- Three unique quotas exist for this licence type. These licences are for larger tonnages and as such are restricted to fishing between the dates of November 7, 2011 (00:00h) to February 9, 2012 (23:59h); and October 1, 2012 (00:00h) to November 6, 2012 (23:59h).
- Licences over that are not unique quota licences will be issued on a first come, first served basis, until the TAC for ZY1 licenses has been reached.

7.2.4 ZY3 – Domestic Food and Bait Herring

- Licence purpose: Fish caught under authority of this licence may only be sold fresh for non-commercial or non-sport use.
- DFO will be providing the ZY3 allocation for the 2011/12 season.
- Three 50 ton licences are available for the 2011/2012 season as a 150 ton unique quota. These licences are for larger tonnages and as such are restricted to fishing between the dates of November 7, 2011 (00:00h) to February 9, 2012 (23:59h); and October 1, 2012 (00:00h) and November 6, 2012 (23:59h).
- Up to three ZY3 licences may be stacked on a vessel. Vessels may only stack licences from one category at a time. The vessel(s) must be a licensed commercial fishing vessel that meets the criteria for licence issuance.

7.2.5 ZY-4 – Zoo and Aquarium Animal Food

- Fish caught under authority of this licence may only be used to feed animals resident at the zoo or aquarium of the named licence holder.
- One 110 ton licence issued as a unique quota to the Vancouver Aquarium to a licensed commercial fishing vessel that meets the criteria for licence issuance.
- This unique quota is for a larger tonnage and as such is restricted to fishing between the dates of November 7, 2011 (00:00h) to February 9, 2012 (23:59h) and October 1, 2012 (00:00h) to November 6, 2012 (23:59h).

7.3 Licence Type

The special use fishery is not a limited entry fishery. Therefore licence eligibilities are not carried forward from one year to the next based on an established eligibility criteria.

When licences were introduced to the special use fishery in 1995, they were developed with specific licence purposes that dictated the end use of the fish for that licence. These licence purposes are described for each licence category in Section 7.3.

A review as to whether the Department should continue to use licence purposes in the Special Use fishery may be undertaken in consultation with stakeholders during the 2011/12 season.

7.3.1 Unique Quotas

As the special use fishery was developed, there arose a practice of providing unique quotas (previously referred to as “grandfathered licences”) to specific parties for specific purposes within different licence categories. While DFO will no longer provide for the development of new unique quotas, due to historical participation, the existing unique quotas will continue to be made available to the past participants subject to the conditions described in this section. There are currently eight unique quotas in the special use fishery.

Minister’s Discretion under the Fisheries Act

Previously called “grandfathered” or “historical” licences, these allocations are more accurately called “unique quotas”. In the context of the development of the Special Use

Fishery, the technical definition of “grandfathering”⁵ does not apply as it implies that there is an eligibility for access to these allocations and implies there is a statutory or regulatory clause that describes how allocations must be made (or that “grandfathers” certain licence holders). On the contrary, the Minister has absolute discretion regarding the issuance of fishing licences as per the *Fisheries Act S7*.

Consultation

In keeping with existing co-management processes, DFO Fisheries Management will consult regarding proposed changes by DFO which may impact unique quotas.

Stable Allocation

Over the years DFO has adopted a practice of providing a stable allocation to these unique quotas, after conservation and Food, Social, and Ceremonial (FSC) allocation objectives have been met. However, this stable allocation does not infer priority allocation.

Expected Use of Fish

The unique quotas are issued to specific parties for specific purposes, as described below:

- ZY1 Sport Bait
 - Fish caught under authority of this licence may be sold only as live bait to sport fishers or frozen for domestic or export sport bait.
 - Issued to:
 - Walcan Seafood Ltd (300 tons, SOG)
 - Charlie’s Live Bait (15 tons, SOG)
 - Martin Lowe (9 tons, SOG)
- ZY2 Commercial Bait
 - Fish caught under authority of this licence may be sold only as fresh or frozen bait for commercial use to commercial fishers.
 - Issued to:
 - Charles Pilfold (10 tons, PRD)
 - Max Haines (10 tons, PRD)
 - Julius Boudreau (10 tons, PRD)
- ZY3 Human Food and Bait
 - Fish caught under authority of this licence may only be sold fresh for non-commercial or non-sport use
 - Issued to:
 - Seven Seas Fish Co. Ltd. (150 tons, SOG)
- ZY4 Zoo and Aquarium Food

⁵ To be “grandfathered” means that one benefits from a grandfather clause, which is a statutory or regulatory clause that exempts a class of persons or transactions because of circumstances existing before the new rule or regulation takes effect.

- Fish caught under authority of this licence may be used only to feed animals resident at the zoo or aquarium of the named licence holder.
- Issued to:
 - Vancouver Aquarium (110 tons, SOG)

7.4 Licence Fees

The licence fee is \$30.00 per licence.

7.5 Licence Application

Special use herring licence application forms are available at any of the three Pacific Fishery Licence Units (PFLU).

Eligible applicants must submit a completed Application for Special Use Herring Licence along with the required fee of \$30.00 to a PFLU. A separate application must be submitted for each special use herring licence category. Special use herring licence applications may be submitted together with the required fee in person or by mail to any PFLU.

The applicant must sign the application form. Where the applicant is a company, a Confirmation of Signing Authorities or an Amendment to Confirmation of Signing Authorities, which must be kept on record at the PFLU. This must correspond with the information on the current BC Company Summary on record with the PFLU.

The applicant must designate a registered commercial fishing vessel that is eligible for any vessel based licence (i.e. salmon, schedule II, geoduck, sablefish, halibut, crab, shrimp by trawl, groundfish trawl and shrimp and prawn by trap), a valid communal commercial licence or a valid salmon category N licence.

The application must list the name of the vessel master, however, the applicant is not required to be the owner of the designated vessel. Licences may be issued to the applicant who is intending to use or receive the herring. If the herring is to be impounded, then the applicant can be the impoundment operator.

No party may hold more than one special use herring licence at a time. Where a special use herring licence has been landed and validated and all conditions have been met, the licence holder may apply for another special use herring licence.

No fishing may commence until the licence is received and is on board the vessel.

7.6 Licence Requirements

The following requirements must be met prior to the issue of a special use herring licence:

- Prior to licence issuance, proof of monitoring will be required via a letter from the service provider verifying their agreement with the delivery of a fishery monitoring and catch reporting program as outlined in this IFMP.

- Only ZY3 and ZY4 Licences may be redesignated to different vessels once licences have been issued.
- Designated vessels may fish a maximum of five category ZY1 licences at one time. While stacking of licences is permitted, all catch landings must be validated against an issued licence and in the case of a vessel with stacked licences, all landings will be accounted for against individual licences stacked on the vessel. A vessel may not stack licences from more than one category at a time.

7.7 Licence Documents

7.7.1 Valid Period

Special use herring ZX or ZY licences are valid from the date of issue to November 6 of the next calendar year, unless otherwise specified on the licence conditions. The special use fishery is closed by Regulation from 00:01 hours February 10, 2012 to 23:59 hours April 30, 2012 for the roe herring season.

Licences that have been obtained prior to the February 9 closure but have remaining quota may be used after the fishery re-opens May 1.

7.7.2 Replacements

Replacements for lost or destroyed licence documents may be obtained by completing a Declaration Concerning Licence Documents form. Please contact a PFLU for further details.

7.7.3 Vessel Redesignation

Vessel redesignation after licence issuance is permitted for the ZY3 and ZY4 licence category only, or at the discretion of the lead resource manager. An Application for Vessel Redesignation must be completed and submitted to a PFLU for approval. The application form may be found online at:

<http://www.pac.dfo-mpo.gc.ca/fm-gp/licence-permis/forms/vessel-redesignation.pdf>

Licence holders must:

- Ensure all requirements for licence issuance, detailed above are met with regard to the replacement vessel.
- Return the current year licence documents and validation tabs with the redesignation application.

APPENDIX 11. COMPLIANCE PLAN

Conservation and Protection Program Description

Fisheries and Oceans Canada (DFO's) Conservation and Protection (C & P) program is responsible for enforcing the *Fisheries Act* and pursuant regulations and related legislation. Enforcement activities are carried out by Fishery Officers across Canada who conduct patrols on land, at sea and in the air.

The Department promotes compliance with the law through a range of activities from education and awareness activities that encourage Canadians to protect fishery resources and habitats, patrol activities to detect violations, and major case management. These activities are further outlined in the C & P National Compliance Framework.

There are approximately 173 fishery officers stationed in the Pacific Region, which encompasses British Columbia and Yukon Territory. They are designated as "Fishery Officers" under Section 5 of the *Fisheries Act*. The *Fisheries Act* and the *Criminal Code of Canada* are the primary pieces of legislation outlining the powers and responsibilities of Fishery Officers. Officers are designated under other Acts as well, such as the *Coastal Fisheries Protection Act* and *Species at Risk Act*.

Users of the resource have a responsibility to report violations. Any suspected or actual fisheries, wildlife or pollution violations can be quickly and discretely reported to the appropriate enforcement officer by using the toll free observe, record and report hotline. This toll free number is available 24 hours a day.

OBSERVE, RECORD AND REPORT 1-800-465-4DFO (1-800-465-4336)

Enforcement enquiries can also be directed to the local field offices during regular office hours.

Regional Compliance Program Delivery

Enforcement of the herring fishery will be tempered by commitments to higher priority issues, such as species at risk, CSSP and fisheries that have conservation concerns. C&P staff will pursue opportunities to monitor and enforce issues and problems related to the herring fishery in conjunction with the monitoring and enforcement activities dedicated to the identified priority fisheries in the Pacific Region.

Fishery Officers conduct a range of activities to promote compliance during herring fisheries. These activities include attending industry and herring working group meetings, defining key enforcement concerns with Fisheries Management prior to the commercial fishery, conducting patrols, at sea boardings and plant inspections during the fishery, and detailed post season reporting.

Dockside validation is a key component of the management of the herring fishery. C & P supports dockside validation by checking in with validators, attending offloads and monitoring offloading practices.

Air surveillance resources will be utilized to patrol boundaries and conduct gear and vessel counts. Charter aircraft as well as DFO aircraft may be utilized for these activities.

Consultation

C & P strives to meet with First Nations groups to build relationships. Fishery guardians are integral to this process and are very important to our enforcement program. C & P conducts joint patrols of First Nations fisheries and strives to complete enforcement protocols to better define our working relationship.

C & P attends industry meetings with Fisheries Management. These meetings occur in several geographic areas and are important to exchange information and share concerns.

Compliance Performance

Roe Herring

Compliance during the 2011 roe herring fishery was very good. In the Strait of Georgia there was two warnings issued for fishing in a closed area. There were a total of 427.5 hours spent regionally by C & P on the commercial roe herring fishery.

C & P conducted numerous patrols of the fishery, inspected plants, monitored validations, inspected licences and gear, as well as assisted Fish Management.

During the Strait of Georgia fishery, Fishery Officers were deployed in teams to cover fishing activity. There was a decline in patrol effort over past years due to higher priority enforcement issues.

In the Prince Rupert area, C & P conducted numerous patrols by rhib and with the CCGS Kitimat II. Patrol effort was divided between on water patrols of Big Bay and Kitkatla and the offloads occurring at plants within Prince Rupert and Port Edward.

Spawn on Kelp

There is continued concern with non-compliance of hail requirements, as hails do not always reflect actual activities on the grounds. C&P will be working with Fisheries Management and the hail system service provider to improve reporting compliance.

Food and Bait and Special Use

Two occurrence reports were received. One was for a vessel exceeding quota and the second was for exceeding quota and dumping fish. No charges were laid. C & P will be working with Fisheries Management to develop enforcement guidelines for this fishery.

Current Compliance Issues

Enforcement priorities for the 2012 fishery include inspecting licences and gear and ensuring compliance with hail requirements. C & P will monitor offloads at fish plants to ensure that all offloads are validated and to support validation staff.

APPENDIX 12: FISHING VESSEL SAFETY

Vessel owners and masters have a duty to ensure the safety of their crew and vessel. Adherence to safety regulations and good practices by owners, masters and crew of fishing vessels will help save lives, prevent vessel damage and protect the environment. All fishing vessels must be in a seaworthy condition and maintained as required by Transport Canada (TC), WorkSafeBC, and other applicable agencies. Vessels subject to inspection should ensure that the certificate of inspection is valid for the area of intended operation.

In the federal government, responsibility for shipping, navigation, and vessel safety regulations and inspections lies with Transport Canada (TC); emergency response with the Canadian Coast Guard (CCG) and DFO has responsibility for management of the fisheries resources. In B.C., WorkSafeBC also regulates health and safety issues in commercial fishing. This includes requirements to ensure the health and safety of the crew and safe operation of the vessel. DFO (Fisheries and Aquaculture Management (FAM) and CCG) and TC through an MOU have formalized cooperation to establish, maintain and promote a safety culture within the fishing industry.

Before leaving on a voyage the owner, master or operator must ensure that the fishing vessel is capable of safely making the passage. Critical factors for a safe voyage include the seaworthiness of the vessel, vessel stability, having the required safety equipment in good working order, crew training, and knowledge of current and forecasted weather conditions. As safety requirements and guidelines may change, the vessel owner, crew, and other workers must be aware of the latest legislation, policies and guidelines prior to each trip.

There are many useful tools available for ensuring a safe voyage. These include:

- Education and Training Programs
- Marine Emergency Duties
- Fish Safe Stability Education
- First Aid
- Radio Operators Course
- Fishing Masters Certificates
- Small Vessel Operators Certificate
- Publications:

- Transport Canada Publication TP 10038 *Small Fishing Vessel Safety Manual* (can be obtained at Transport Canada Offices from their website at: <http://www.tc.gc.ca/eng/marinesafety/tp-tp10038-menu-548.htm>)
- Gearing Up for Safety – WorkSafeBC
- Safe At Sea DVD Series – Fish Safe
- Stability Handbook – Fish Safe and Measuring Stability – DVD

For further information see: <http://www.tc.gc.ca/eng/marinesafety/menu.htm>

1. Important Priorities for Vessel Safety

There are three areas of fishing vessel safety that should be considered a priority. These are: vessel stability, emergency drills, and cold water immersion.

Fishing Vessel Stability

Vessel stability is paramount for safety. Care must be given to the stowage and securing of all cargo, skiffs, equipment, fuel containers and supplies, and also to correct ballasting. Fish harvesters must be familiar with their vessel's centre of gravity, the effect of liquid free surfaces on stability, loose water or fish on deck, loading and unloading operations and the vessel's freeboard. Know the limitations of your vessel; if you are unsure contact a reputable naval architect, marine surveyor or the local Transport Canada Marine Safety Office.

Fishing vessel owners are required to develop detailed instructions addressing the limits of stability for each of their vessels. The instructions need to be based on a formal assessment of the vessel by a qualified naval architect and include detailed safe operation documentation kept on board the vessel. Examples of detailed documentation include engine room procedures, maintenance schedules to ensure watertight integrity, and instructions for regular practice of emergency drills.

Every fishing vessel **above 15 GRT** built **or converted** to herring or capelin after 06 July 1977 and engaged in fishing herring or capelin must have an **approved stability book**. Additionally Transport Canada has published a Stability Questionnaire (SSB 04/2006), and Fishing Vessel Modifications Form which enable operators to identify the criteria which will trigger a stability assessment. A stability assessment is achieved by means of an inclining experiment, which has to be conducted by a naval architect. Please contact the nearest Transport Canada office if you need to determine whether your vessel requires one.

Fish Safe BC

Fish Safe encourages Vessel masters and crew to take ownership of fishing vessel safety. Through this industry driven and funded program Fish Safe provides fishing relevant tools and programs to assist fishermen in this goal. The Fish Safe Stability Education Course, is available to all fishermen who want to improve their understanding of stability and find practical application to their vessel's operation. The Safe on the Wheel Course is designed to equip crewmen with the skills they need to safely navigate during their wheel watch. The Safest Catch Program along with fishermen trained safety advisors is designed to give fishermen the tools they need to create a vessel specific safety management system.

Fish Safe is managed by Gina McKay along with Project Coordinator John Krgovich and fishermen safety officers. All activities and program development is directed by the Fish Safe Advisory Committee (membership is open to all interested in improving safety on

board). The advisory committee meets quarterly to discuss safety issues and give direction to Fish Safe in the development of education and tools for fish harvesters.

Fish Safe also works closely with WorkSafe BC to improve the fishing injury claims process.

For further information, contact:

Gina McKay
Program Manager
Fish Safe
#2, 11771 Horseshoe Way
Richmond, BC V7A 4V4

Phone: 604-261-9700
Cell: 604-339-3969
Fax: 604-275-7140
Email: admin@fishsafebc.com
www.fishsafebc.com

Emergency Drill Requirements

The master must establish procedures and assign responsibilities to each crew member for emergencies such as crew member overboard, fire, flooding, abandoning ship and calling for help.

The Crewing Regulation under the Canada Shipping Act (CSA) states that as of July 30th 2002 all seafarers, including fish harvesters, must have a Basic Safety Certificate (MED A1 or A3 depending upon vessel and operating waters) within 6 months of becoming a crewmember, regardless of time at sea. The MED A1 is a three day course, and must be taken by all crew regardless of duty station.

MED provides a basic understanding of the hazards associated with the marine environment; the prevention of shipboard incidents; raising and reacting to alarms; fire and abandonment situations; and the skills necessary for survival and rescue.

Cold Water Immersion

Drowning is the number one cause of death in B.C.'s fishing industry. Cold water is defined as water below 25 degrees Celsius, but the greatest effects occur below 15 degrees. BC waters are usually below 15 degrees. The effects of cold water on the body occur in four stages: cold shock, swimming failure, hypothermia and post-rescue collapse. Know what to do to prevent you or your crew from falling into the water and what to do if that occurs. More information is available in the WorkSafe Bulletin *Cold Water Immersion* (available from the WorkSafe BC website).

Other Issues

Weather

Vessel owners and masters are reminded of the importance of paying close attention to current weather trends and forecasts during the voyage. Marine weather information and forecasts can be obtained on VHF channels 21B, Wx1, Wx2, Wx3, or Wx4. Weather information is also available from Environment Canada website at:

http://www.weatheroffice.gc.ca/marine/index_e.html

Emergency Radio Procedures

Vessel owners and masters should ensure that all crew are able to activate the Search and Rescue (SAR) system early rather than later by contacting the Canadian Coast Guard (CCG). It is strongly recommended that all fish harvesters carry a registered 406 MHz Emergency Position Indicating Radio Beacon (EPIRB). These beacons should be registered with the National Search and Rescue secretariat. When activated, an EPIRB transmits a distress call that is picked up or relayed by satellites and transmitted via land earth stations to the Joint Rescue Co-ordination Centre (JRCC), which will task and co-ordinate rescue resources.

Fish harvesters should monitor VHF channel 16 or MF 2182 Khz and make themselves and their crews familiar with other radio frequencies. All crew should know how to make a distress call and should obtain their restricted operator certificate from Industry Canada. However, whenever possible, masters should contact the nearest Canadian Coast Guard (CCG) Marine Communications and Traffic Services (MCTS) station (on VHF channel 16 or MF 2182 kHz) prior to a distress situation developing. Correct radio procedures are important for communications in an emergency. Incorrect or misunderstood communications may hinder a rescue response.

Since August 1, 2003 all commercial vessels greater than 20 metres in length are required to carry a Class D VHF Digital Selective Calling (DSC) radio. A registered DSC VHF radio has the capability to alert other DSC equipped vessels in your immediate area and MCTS that your vessel is in distress. Masters should be aware that they should register their DSC radios with Industry Canada to obtain a Marine Mobile Services Identity (MMSI) number or the automatic distress calling feature of the radio may not work. For further information see the Industry Canada site at: http://www.ccg-gcc.gc.ca/eng/CCG/MCTS_Mmsi

A DSC radio that is connected to a GPS unit will also automatically include your vessel's current position in the distress message. More detailed information on MCTS and DSC can be obtained by contacting a local Coast Guard MCTS centre (located in Vancouver, Victoria, Prince Rupert, Comox and Tofino) or from the Coast Guard website: www.pacific.ccg-gcc.gc.ca

Collision Regulations

Fish harvesters must be knowledgeable of the *Collision Regulations* and the responsibilities between vessels where risk of collision exists. Navigation lights must be kept in good working order and must be displayed from sunset to sunrise and during all times of restricted visibility. To help reduce the potential for collision or close quarters situations which may also result in the loss of fishing gear, fish harvesters are encouraged to monitor the appropriate local Vessel Traffic Services (VTS) VHF channel, when travelling or fishing near shipping lanes or other areas frequented by large commercial vessels. Vessels required to participate in VTS include:

- a) every ship twenty metres or more in length,

- b) every ship engaged in towing or pushing any vessel or object, other than fishing gear,
- c) where the combined length of the ship and any vessel or object towed or pushed by the ship is forty five metres or more in length; or
- d) where the length of the vessel or object being towed or pushed by the ship is twenty metres or more in length.

Exceptions include:

- a) a ship towing or pushing inside a log booming ground,
- b) a pleasure yacht *less than* 30 metres in length, and
- c) a fishing vessel that is *less than* 24 metres in length and not *more than* 150 tons gross.

More detailed information on VTS can be obtained by calling (604) 775-8862 or from Coast Guard website: <http://www.ccg-gcc.gc.ca/e0003901>

Buddy System

Fish harvesters are encouraged to use the buddy system when transiting, and fishing as this allows for the ability to provide mutual aid. An important trip consideration is the use of a sail plan which includes the particulars of the vessel, crew and voyage. The sail plan should be left with a responsible person on shore or filed with the local MCTS. After leaving port the fish harvester should contact the holder of the sail plan daily or as per another schedule. The sail plan should ensure notification to JRCC when communication is not maintained which might indicate your vessel is in distress. Be sure to cancel the sail plan upon completion of the voyage.

WorkSafe BC

Commercial fishing is legislated by the requirements for diving, fishing and other marine operations found in Part 24 of the Occupational Health and Safety Regulation (OHSR). Many general hazard sections of the OHSR also apply. For example, Part 8: Personal Protective Clothing and Equipment addresses issues related to safety headgear, safety foot wear and personal floatation devices. Part 15 addresses issues on rigging, Part 5 addresses issues of exposure to chemical and biological substances, and Part 3 addresses training of young and new workers, first aid, and accident investigation issues. Part 3 of the Workers Compensation Act (WCA) defines the roles and responsibilities of owners, employers, supervisors and workers. The OHSR and the WCA are available from the Provincial Crown Printers or by visiting the WorkSafeBC website: www.worksafebc.com

For further information, contact an Occupational Safety Officer:

Shane Neifer	Terrace	(250) 615-6640
Bruce Logan	Lower Mainland	(604) 244-6477
Wayne Tracey	Lower Mainland	(604) 232-1960

David Clarabut	Victoria	(250) 881-3469
Pat Olsen	Courtenay	(250) 334-8777
Mark Lunny	Courtenay	(250) 334-8732

or the Manager of Interest for Fishing, Mike Ross (250) 881-3419.

For information on projects related to commercial fishing contact Ellen Hanson (604) 233-4008 or Toll Free 1-888-621-7233 ext. 4008 or by email: Ellen.Hanson@worksafebc.com.